DOCUMENT RESUME

ED 159 646	CS 004 383

AUTHOR	Moyle, Donald, Ed.
TITLE	Reading: What of the Future? Proceedings of the United Kingdom Reading Association, Edge Hill College, 1974.
INSTITUTION	United Kingdom Reading Association.
PUB DATE	75
NOTE	307p.; Parts marginally legible due to small type
AVAILABLE FROM	Ward Lock Educational, 116 Baker Street, London W1M 2BB, England (Write for price)
EDRS PRICE	MF-$0.83 Plus Postage. HC Not Available from EDRS.
DESCRIPTORS	Conference Reports; *Early Reading; Foreign Countries; Intelligence; *Language Development; Reading Achievement; *Reading Difficulty; Reading Improvement; *Reading Instruction; Reading Programs; *Reading Research; *Teacher Education

ABSTRACT

The 40 articles in this collection deal with issues and problems in the learning and teaching of reading and offer suggestions for future policy concerning reading. The articles cover the entire reading field, including the relationships among language, intelligence, and reading; early reading schemes; extending reading; reading difficulties, including adult illiteracy; an international survey of learning to read in differing languages and cultures; and an examination of teacher education. (FL)

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ED159646

Reading: What of the future?

Proceedings of the eleventh annual conference of
the United Kingdom Reading Association
Edge Hill College 1974

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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Editor Donald Moyle

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CS 004 383

Ward Lock Educational

ISBN 0 7062 3445 6 hardback
0 7062 3446 4 paperback

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First published 1975

Set in 10 on 11 point Monotype Plantin
by Woolaston Parker Limited, Leicester
and printed by Robert MacLehose Limited, Glasgow
for Ward Lock Educational
116 Baker Street, London W1M 2BB
Made in Great Britain

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Foreword

The eleventh Annual Conference of the United Kingdom Reading Association took place at Edge Hill College, Ormskirk, in the summer of 1974. The Conference coincided with the time at which the Committee o Enquiry into Reading and the Use of English, under the chairmanship o Sir Alan Bullock, had completed its task but the findings of the Committe had not been published.

The occasion, therefore, presented a splendid opportunity for speaker from all branches of the educational world to present their own views concerning the issues and problems which are present in the learning an teaching of reading and make their own prescription for success in th coming years.

Seventy-two people made contributions to the Conference programme through the medium of lectures, seminars and workshops. This volume unfortunately can contain only a selection of the papers presented, but a the same time it should provide an interesting companion to the Bullock Report *A Language for Life*.

One interesting difference between this volume and the Bullock Report is that here many differing views of reading, and hence varying suggestions as to what the future policy concerning reading should emphasize, are presented. This divergence of view should prove stimulating and hopefully will lead the reader to a careful reexamination of his own policy and practice in the teaching of reading.

UKRA is most grateful to all contributors for giving so freely of their time, energy and expertise.

Part 1
Reading: what of the future?

1 Reading: what of the future?

Donald Moyle

The publication of the most recent survey of national standards in reading (Start and Wells 1972) gave rise to bitter criticism of our schools and colleges and to 'progressive' movements in education. The survey suggested that after average standards had steadily risen from 1949 until 1964, they appeared to have levelled off or even slightly declined in 1971. The outcry led to the Secretary of State for Education setting up the first committee of enquiry into reading and the use of English ever to have been held in Britain. The Committee, under Sir Alan Bullock, is at this moment completing the drafting of its report and its publication is now eagerly awaited.

Reading standards

It is not proposed here to enter into a detailed evaluation of the evidence as to whether our eleven and fifteen year old children are in fact at the same, a higher or lower level of achievement than their counterparts in 1964 on the basis of the tests used. Certainly the figures presented did not justify the outraged position adopted by many of our national daily papers. Further, the worst possible effect would be gained by stirring teachers into a state of panic which would shatter their confidence and leave them at the mercy of the first enthusiast who purported that he had produced the method and materials which would cure all our reading ills.

The tests employed in the survey are very narrow instruments in terms of their range and the type of reading skill which is tested. The researchers themselves made the request that new instruments should be devised for future surveys. Equally, there might be a lack of relationship between performance in the tests and the ability of the children to use their reading skills in normal classroom or real-life reading tasks.

Undoubtedly some of our difficulty stems from our lack of definition of the nature of reading and the lack of clear objectives concerning what we hope to achieve. Gephart (1970) expressed this lack of direction after considering evidence collected for the Adult Functional Literacy project still ongoing in the United States of America.

> Many statements have been made which assert that our society has a reading problem. These assertions have been made with sufficient

> authority and frequency that they have been accepted as fact: a reading problem exists. What is the desirable level of reading competence to be achieved by the individual in our society? Even more basically, what level of reading competence is necessary to function in our culture? Neither of these questions has been answered on either an empirical or logical basis.

In short therefore, the need may not merely be for the monitoring of standards but rather more for a clearer definition of what it is we are trying to achieve. It may be that in our haste to produce better standards which can be measured by existing tests we could simply produce 'more statistically respectable nonreaders' (Gardner 1968) — people who can read, but don't.

Our tests, however, are not the only measure of the trends of reading. We sometimes forget that in terms of our population as a whole, the expectation that everyone should possess the ability to read is a fairly recent innovation. Certain elements here are interesting. 1919 was the first year when more than half the adult population purchased a Sunday newspaper. In 1957 for the first time more than half the adult population of Britain read more than one book per year. Today it is estimated that the average adult reads thirty books per year, though we know that the proportions are very unevenly spread. Add to this the ever growing volume of other types of printed material and it would seem that in terms of usage, more people are spending more time on reading for both information and enjoyment.

Another interesting way to look at reading standards is to compare British standards with those of other 'developed' nations. Here the evidence available suggests that our standards are not something to be ashamed of. For example, the average American adult reads fewer books than his British counterpart and, as a percentage the USA has four times our illiteracy problem, though in fairness their society has rather different problems.

All this should serve to dispel any tendency to panic but we cannot be complacent. We still produce far too many nonreaders at the end of eleven years of compulsory schooling and far too many children with insufficient skill or such poor attitudes towards reading that the pursuit plays little part in their lives.

Do we need to read?

McLuhan (1967) has suggested that the needs of society are changing and he foresees a return to the greatly increased usage of oral language. Certainly, it is now possible to speed up or slow down tape recorded speech so that the listener can match the speed to his ability to comprehend. Further, with training and practice it should be possible to develop our ability to comprehend spoken language much beyond our present levels. Even so it would seem unlikely that written language will play a smaller part in our lives in the foreseeable future. Written language is much more appropriate for study purposes for it gives the individual far more ability to interpret the message and thus make his personal judgment than does spoken language where emphasis, pause and intonation can often prevent the listener from considering other possible interpretations.

At the moment the trend is for society to demand more usage of reading. The amount of time given to reading activity appears to be on the increase and Murphy (1973) found that the average American spent two hours per day upon reading. The skill then plays quite a major part in the average adult's life.

The literacy demands of society are not static. Society asks its members today not only to read more but also to read at a higher level. A reading level equivalent to that of the average nine year old used to be considered sufficient to function in society, but at present to make a reasonable job of reading a newspaper or fill in one of the many government forms, the minimal level is more like that of the thirteen or fourteen year old.

However, the final word upon the need to be able to read must be given to those who cannot — the adult illiterates. They describe their inability to obtain and keep a job. They tell of the shame which leads to the subterfuges they resort to in order to hide the fact from their employer, their friends and even their wives. Lack of reading ability in our society leads often to social ostracism, a lowering of personal self-image and monotonous employment.

Towards improvement

In the past the emphases in reading have often been upon word identification; a significant advance would be made if we put meaning, its extraction, processing and use at the top of the list.

Purposefulness and enjoyment should be a feature of reading at every stage of development. The child must feel that he gets meaning out of each reading occasion and that this meaning has value for him in terms of his present needs.

Equally, education must also be concerned with future adult needs. Yet we have overstressed the importance of books in comparison with the vast range of media which children will use in adult life. This has meant that many skills and reading strategies, which different materials read for different purposes demand, have been left to the individual to develop as best he can. In short, the teaching of reading must be more directly related to the practical reading tasks which adults undertake. Murphy (1973) states that one major fault of the American school system is that rarely are children asked to undertake reading work in school which even vaguely resembles the type of reading society demands of adults.

In recent years reading teaching has on the whole been taking place at the individual level. There are very strong arguments for the individualization of instruction but perhaps it has been rather overemphasized. There is room for a balance whereby children in the group situation through cooperative and comparative reading stimulate each others' thinking by discussion of what has been read. Often the teaching of reading has been completely isolated from the use of reading. We must ensure that this trend is reversed and that the whole curriculum is used as a resource for reading.

Research work

In the past, all too frequently reading research has been narrowly concerned with attempts to prove the superiority of one media, method or set of materials over another. Strangely, usually as a byproduct of such research, has come a realization that the teacher appears to be the most important variable in the reading success enjoyed by the children.

Even those researches which hold valuable insights that would be of great practical help to schools in their planning and teachers in their daily work have not been disseminated so that they have impact. Research and action within the schools should be brought more closely together and what better way is there than having the teachers fully involved and the research concerned with total practice rather than isolated bits of learning experience.

There is still much work to be done in the general area of language learning and in particular how the deficits from a poor linguistic environment may be eradicated. Perhaps most important, however, are detailed enquiries into the factors which govern the level of success achieved by different children and teachers.

Teacher education

Over the past few years colleges have been expanding and improving their courses aimed at professional preparation generally, and work in reading specifically. At the moment, however, teacher education and the future of colleges is in the melting pot. Some of the early pointers to the future give cause for concern.

It would appear that the reorganization and the drive for an all-graduate profession may lead to a greater amount of time being spent upon study geared towards personal development and less upon professional preparation. Further, the desire to establish courses which would allow students to delay their decision as to whether they wish to make a career of teaching seems to lead to consecutive rather than concurrent courses of training, with professional work appearing only in the final year of a three-year course. Teacher trainers have long complained of the difficulties of covering the necessary ground and giving opportunity for professional development in one-year graduate certificate courses yet this could well be the pattern for all students in the future.

The James Report (1972) envisaged the follow-up of initial courses in the induction year. This would seem to compensate for a contraction of professional work in initial training. However, at this moment in time LEAs do not appear to show any great enthusiasm to appoint professional tutors within the schools or to make provisions for the day-release courses proposed.

There can be no doubt that more time given to reading courses in initial training would be beneficial but equally college tutors need carefully to reexamine courses to ensure a good mixture of theory and practice. Students must be familiar with ranges of materials and various methods but should equally be aware of the issues and problems in the field and the nature of the child's acquisition of language and reading. Any further time available might be best used in supervised and carefully evaluated practical work with children.

Teacher education is increasingly seen as an ongoing process over the years but in order for this to be really effective the various courses and experiences need to be closely related. There is a great need to have courses which are related and take the teacher progressively to deeper and wider understanding.

One possible way of achieving integration might be to have regional centres for language and reading which, in addition to display, advisory and research facilities, might provide courses at both initial and inservice level. At Edge Hill College we have been undertaking a good deal of work both in the college and in the schools where members of past and present in-service courses have acted as tutors.

There is a considerable shortage both in schools and colleges of teachers who have studied reading in depth. One of the most urgent needs would seem to be mounting courses for advanced training in the reading field and again language and reading centres could draw together from the schools, advisory services and the colleges the small band of people with the appropriate background to staff such courses.

Local education authorities

Investment in reading by LEAs seems largely in the past to have consisted of creating posts for teachers to try and eradicate reading problems at the beginning reading stage. The provision of specialist reading teachers and advisers who could have an impact on the development of reading for all children at all ages is very much overdue.

LEAs rarely have an explicit policy for reading and the institution of such a policy for reading development would be of considerable help to teachers. One major step forward would be a real recognition of the importance of the early years of schooling by mobilising help in such a way that the teacher child ratio in infant schools could be greatly increased.

The schools

It is of course in the schools where things really happen and all advances made in related fields should clearly take place to improve reading teaching in the school. Just as the LEA should have a policy for reading, so should the school and there must be liaison between schools catering for the different age ranges in the same area.

Having established a policy the school must then constantly review not only the progress of the children but also its organization, methods and materials to ensure that the aims are being realized.

Above all, it is time for teachers to leave behind useless arguments about the respective merits of look and say and phonics and concentrate on finding ways of improving attitudes towards reading and bringing more purposeful and indeed enjoyable reading activities into the classroom.

One thing of which we can be certain is that the success of the children is directly linked to the quality and enthusiasm of the teacher. With this in mind teachers should move forward, confident that they can overcome all the difficulties and produce children who not only can read, but do, and will continue to do so throughout adult life.

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2 Bullock—an international perspective

John Downing

England vis-a-vis other countries

One way to review the effectiveness of reading education in England is by comparing it with what is done in other countries.

The author of this article recently completed an international investigation of the factors which affect children's experiences in learning to read. Fourteen countries were chosen to represent important cultural and linguistic differences in the area of literacy learning: Argentina, Denmark, Finland, France, Germany, Great Britain, Hong Kong, India, Israel, Japan, Norway, Sweden, USA and USSR.

One or two specialists in reading education prepared a descriptive account for each country. They were given a few headings for their report in an attempt to ensure that certain topics known to be of common concern would be comparable across the fourteen countries. But this guidance was deliberately minimal because a large degree of open-endedness was desirable to allow each national specialist to stress spontaneously what he considered to be the important characteristics of learning to read and write in the country he described. Special studies were made also of:

1 methods of research in cross-cultural studies
2 the attitudinal content of children's readers in different countries
3 all previous cross-national research on reading and writing.

All the resulting data from these sources were analysed by this author and the final report (Downing 1973) amounts to the findings of a cooperative survey by a well-qualified team of international specialists in the field of reading education. That is the basis on which these detailed predictions of the findings of the Bullock Report are made in this article.

Strengths of reading education in English schools

Bullock will almost certainly give deserving approval to the following nine characteristics of reading education in England:

1 *The child-centred approach*

Prediction Despite Black Paper propaganda, Bullock should renew that support given to child-centred education by the Plowden Committee which was so nicely summarized in its title *Children and Their Primary Schools* (Central Advisory Council for Education 1967).

Reason Child-centred schools in England have brought about real individualization of teaching — a genuine concern to match literacy learning activities with the individual abilities, aptitudes and interests of each child. *This individual approach leads to the greatest efficiency in learning because it takes account of all aspects of the literacy learning situation.* In contrast, the curriculum-centred approach which is still prevalent in many other countries is inefficient because it attends to only one segment of the total literacy learning situation — what the teacher thinks he is teaching. The child-centred approach capitalizes on the best moments for each child's readiness to learn. Instead of a curriculum the teacher's knowledge becomes a bank to be drawn upon at the most opportune moment for its investment in the child's learning.

2 *Concern for total development of the child*

Prediction Bullock should recognize the success of most English primary schools in placing reading in the perspective of the development of the child as a whole.

Reason The risk of emotional disturbance due to pressure to learn to read at an early age is considered seriously in some countries (e.g. Sweden) but is more or less disregarded in others (e.g. United States). Teachers in England are more like their Scandinavian colleagues. They do not give reading the highest priority. Reading is a very important skill but the overall personality development of the child is more important.

3 *The 'language-experience approach'*

Prediction Bullock should applaud the use of the child's own language in reading education. This procedure is widespread in English primary schools, although the technical name for this method is not well known. It is the 'language-experience approach'.

Reason In some countries schools place much more emphasis on the mechanics right from the start. The result is that many children are incorrectly oriented towards the purposes of literacy. They learn that 'reading' is a school ritual performed to please the teacher, which has nothing to do with the real world outside school. In contrast, in the language-experience approach as practised in many primary schools in England, through experiences of authorship the child learns the functions of reading and writing and, if these experiences are maintained consistently throughout his schooling, these functions of literacy become an accepted part of living. The language-experience approach also develops children's concepts of language, especially those to do with the relationship between speaking and writing. Furthermore, the language-experience approach ensures that the language to be read in learning to read matches as closely as possible the child's individual background of past experience of spoken language.

4 *Integrated reading and writing*

Prediction Bullock should congratulate primary school teachers in England on the way that they have integrated reading and writing with other activities in school.

Reason Such integration ensures that children will perceive the truth about written language — that it is as relevant and functional as spoken language for communication. This current practice provides a wealth of experience for learning the purposes of literacy in the early years, and its continuation in later years ensures that reading and writing are motivated intrinsically.

5 *Availability of books in schools*

Prediction The Bullock Report may call for *still more books* to be made available to young children. That would fit in with past trends. But, in fact, compared with other countries, England deserves some praise in this respect.

Reason In some wealthier school districts in the United States, for example, the book environment is surprisingly poor. In the English infant school, much thought and care is given to providing as wide a range as possible of books displayed attractively for the children. In some other countries this is seen as 'a waste of money because the children cannot yet read them'. In contrast, the infant schools in England more often recognize that the availability of books for browsing is an important motivating force as well as a chance to explore reading for oneself.

6 *Local autonomy of the school*

Prediction The autonomy of the individual school in England is an enormous asset to reading education in this country. The *educational* significance of this professional freedom deserves to be emphasized by the Bullock Report.

Reason This feature of English schools is well known. Bereday (1966) states, 'In England . . . education is almost completely decentralized. Decisions involving the curricula are almost all in the hands of . . . professional teachers.' And, 'in matters of curriculum, methods, and texts, not only headmasters but teachers also are autonomous.' Comparatively also, Blackie (1967) is correct in asserting, 'In no other country in the world is so much responsibility put on the headteacher, or, of course, so much liberty of decision given to him.' The positive effect of teacher autonomy has been expressed well in *Reading — Which Approach?* by Southgate and Roberts (1970). They show that a teacher teaches best when he is teaching by what he believes to be the best method.

7 *Evolutionary change*

Prediction When one considers the sudden revolutions and rapid swings of the pendulum of educational fads and fashions in other countries, England has much to be thankful for and Bullock should recognize this.

Reason American reading, for example, is subject to revolutionary changes in methods. They are often sweeping within a school system because of the centralized control of curriculum within the local education authority or school district. Revolutionary changes often accompany a change in the holder of the American office of Superintendent of Schools. Sometimes changes are introduced so rapidly and frequently, that an innovation in reading education is abandoned as 'ineffective' before it has had time to produce any real effects. In contrast, the evolutionary development of teaching methodology in the English system provides a better basis for the progressive improvement of reading education. What is good from the past is retained. Less effective methods fade away. A cool examination is made of new ideas. Some schools will try them and usually give them enough time to show their worth. Progress may be slower but it is surer.

8 *Freedom to read at the age of five*

Prediction The Bullock Report will probably not suggest any change in the age when children are allowed the opportunity to learn to read. Five years of age is likely to continue.

Reason In some countries the age for beginning reading education is seven; in others six. England has one of the lowest ages, five. But there is an international trend to lower the starting age, suggesting that the experience in England has been rewarding.

9 *Child health and nutrition*

Prediction In recent years there have been some indications that the original purposes of school meals and school milk have been forgotten. The Bullock Committee would be wise to remind teachers and the public of the clear relationship between efficient learning and nutrition.

Reason Weakened physical health and malnutrition inhibit learning. In several countries in the *Comparative Reading* survey (Downing 1973) these results of poverty were found to be causing failure in learning to read. For example, in Argentina, 'not the least important contributory cause of school failure is the state of health of the child. In the underprivileged areas . . . a number of related problems can be identified, such as sporadic malnutrition . . . .'

Weaknesses in reading education in England

An optimistic forecast would expect that Bullock will try to correct weaknesses by recommending the following twelve changes in reading education in English schools:

1 *The academic status of reading should be raised*

Prediction Bullock should propose some way of recognizing that reading is a special area of academic study worthy of consideration at the university level. Ideally, two or more chairs of reading should be created (at least two to avoid the development of a single reading orthodoxy). This could be the most beneficial of the Bullock proposals but the pessimist will doubt if Bullock will have the courage to grasp this nettle.

Reason Other changes in the professional education of teachers (see below) are likely to be ineffectual if reading continues to be ignored at the university level. The *Comparative Reading* survey (Downing 1973) found that an educational status system exists in England, and several other countries, and that this system is extremely damaging to reading education. There is a teachers' 'pecking order' related more or less to the age of pupils they instruct. The rationale for this educational status hierarchy probably goes something like this (although one rarely finds it explicitly stated): the infant school teacher just plays games and reads stories to the children. The junior school teacher does *teach*, but only very simple things like reading, writing and reckoning. The secondary school teacher deals with more difficult concepts and specializes in a particular academic subject such as mathematics or history. The teacher trainer obviously must be superior because he's in charge of teachers and deals with these specialist subjects at an even higher level. The university professor is at the top of the hierarchy because he teaches these academic subjects at their most complex level. Also, literacy teaching traditionally is the work of the infant school teacher, and hence the very words 'literacy', 'reading', and 'writing' may have become tainted by their association with the low status of elementary teaching.

The effect on teacher training in reading education is disastrous. At the top of the educational hierarchy in the university, reading is rejected as too elementary a subject for its consideration. At the 'lower' level in teacher-training establishments, it suffers low status because it is not included in university courses. Psychology, philosophy and sociology are subjects that are shared by elementary schools and universities, such as mathematics and history. But reading is a nonuniversity subject, and it suffers in contrast.

This state of affairs is not inevitable, as is shown by developments in Canada and the United States. In those two countries courses designed to prepare reading specialists are offered by colleges and universities most frequently at the master's degree (fifth year) level either in reading *per se* or in other areas with a major in reading. Many universities give an Ed.D and or a Ph.D in this subject, and there is a serious concern for the universities' responsibility for the postgraduate training of researchers in reading.

If departments or centres for reading or language arts were to be created at English universities they could be the spearheads for the rapid growth of a cadre of specialists in reading. These people, in turn, would pass on their training to others in the teaching profession through inservice and preservice courses. Thus, in a relatively short span of time, a much sounder basis of knowledge would filter through and be absorbed by children's teachers.

2 *Professional training in reading education should be improved*

Prediction Even if the Bullock Committee's nerve fails on university status for reading education, it is sure to recommend improvements in teacher

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training in the area of reading education. Provisions for both preservice and inservice education of teachers seem certain to be suggested.

Reason The past five years have seen some important changes for the better, but the notorious neglect of reading in teacher education has existed for years and a huge backlog of inadequate training has to be made good. Probably the very existence of the Bullock Committee stems from this neglect of teacher training in reading. The steady improvement of reading standards in England since 1945 may have reached its ceiling because the good features of English schools had no further reserves of professional knowledge to call upon.

The freedom of the teacher or headteacher to choose the methods and materials for teaching reading is seriously inhibited because of their lack of information about the range of choices available. Similarly, in the child-centred approach in English schools, the solvency of the essential bank of knowledge in the teacher is insecure in respect of reading and language. It is particularly impoverished in information on the psychology of reading and on applied linguistics.

3 *Provisions for reading education should be extended beyond the infant school*

Prediction The Bullock Committee is likely also to recommend that there should be a curriculum for reading education at the junior and secondary stages as well as in the infant school.

Reason Mastery of any skill depends on learning a set of subskills and integrating these into the total skilled act. Mastery also depends on repeated practice over a long period, and retention of mastery only comes after the learner has passed beyond mastery into the area of 'overlearning'. Reading is one of the most complex skills and hence requires a long period for its full development. It is a developmental skill *par excellence*. Unfortunately, this concept of reading as a developmental skill has been poorly understood in education in England, probably because reading has been seen as a part of the subject of 'English' and, because of the educational pecking order phenomenon, a low level part of English at that. In England one of the most serious sources of difficulty in improving reading lies in the traditional view that teaching reading is mainly the task of the infant school. In fact research indicates that children are only just beginning to gain independence in word-attack skills when they transfer to the junior school where, because of this conventional misconception, it has been generally believed that the teachers need no training in the teaching of reading. The result has been the failure of many children to develop mastery or retention of mastery of literacy skills. The majority of children have succeeded because they were able to overcome the shortcomings of this aspect of their schooling. But a sizeable proportion of the population has not been able to escape the consequences of this flaw in the teaching of reading in England. Early failure or poor attainments for one reason or another have caused a distaste for reading which, in turn, causes lack of motivation to practise on one's own. Since the school makes no formal provision or plans for practice, mastery is never attained and overlearning does not occur. The skill is then ready to atrophy as soon as the school's demands for literacy, minimal though they may be, are withdrawn.

4 *Better articulation between levels of school organization*
Prediction Bullock will have something to say about bridging the gap between infant and junior schools. Changing the age of transfer will not produce the desired effect. The key to improvement is greater flexibility and more cooperation between schools at the two levels.
Reason There is evidence that often a rigid boundary has been created between infant and junior methods. Sometimes, the good work of the infant school has been undone by the effects of transfer to the junior school. This transfer is particularly hazardous for the child learning to read and it is aggravated by the administrative practice of transferring all children at one time only in the school year. The infant school procedure of enrolling pupils at different times in the school year according to the birthday of the individual child is excellent from several points of view. It takes account of large differences in development that can be made by a few months of growth. It also ensures that school beginners enter in small numbers into an environment where classmates are already well adjusted to being at school and away from home. But, the same principle is sacrificed to administrative convenience at the stage of transfer to the junior level. Two hazards result:

1 some children receive less infant school experience than they need
2 readiness for the change to a different climate of schooling is not usually taken into account.

The change to 'first schools' and 'middle schools' will not affect the lack of flexibility in this policy of allowing only one time in the year for transfer. Reading is a *developmental* skill and progressive development requires continuity and flexibility of schooling.

5 *Better provisions for cultural and linguistic differences*
Prediction The potentially handicapping effect of social, cultural and linguistic differences is certain to be recognized in some way or other by the Bullock Report. Probably it will recommend that schools should make special provisions to meet the needs of children who have social-class or cultural backgrounds which differ from the standard middle-class Anglo-Saxon 'norm', and that teachers should recognize that differences in language and dialect are not reprehensible but simply variations which deserve to be given fair consideration in fitting teaching to the individual pupil.
Reason The consensus of educational research is that the most efficient way of beginning initial literacy learning is in the vernacular, i.e. the child's own language (Österberg 1961; Macnamara 1966; Modiano 1968). To do

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otherwise is a negation of the child-centred principle of English primary education.

6 *Smaller class size*
Prediction It is unlikely that Bullock will propose a reduction in the size of classes, but it should draw attention to the need to find ways of giving each individual child a larger share of his teacher's time during reading activities.
Reason Several research studies have concluded that large classes do not seem to be a cause of poor reading attainments (e.g. Morris 1959). However, the *Comparative Reading* study (Downing 1973) raises a doubt about previous researches on class size. Possibly they were invalid because very large classes were compared only with large classes and not with truly small classes. In the *Comparative Reading* report a study in Denmark found that a change in the pupil teacher ratio from 1:32 to 1:28 made no observable difference, but when classes of twenty-eight were divided in half for part of the day producing a ratio of 1:14, more satisfactory results in reading were obtained.

7 *Abolition of streaming*
Prediction Bullock ought to lend its strength to the emancipation of children and teachers from the educational constrictions of streaming. The Bullock Committee's stance on this issue may be a measure of their courage in general.
Reason The *Comparative Reading* report's (Downing 1973) review of research in other countries indicates the consensus that streaming is harmful to the development of reading and writing skills. The damage is caused by the teacher's expectations of pupils' aptitudes and abilities in streamed classes. The more homogeneous the class is believed to be, the less the teacher expects to find individual differences and, correspondingly, the less he looks for them and allows for them. Thus streaming works against the individualization of teaching.

8 *Greater use of applied linguistics: 1 Speech*
Prediction The Bullock Report is likely to make some recommendations involving a greater use of applied linguistics in the teaching of reading and related language skills. This will take account of recent developments in the science of linguistics and crossdisciplinary research in sociolinguistics and psycholinguistics. This new knowledge may have many applications to practical problems in teaching children to read, but there are three aspects which should be mentioned in particular. The first is that of spoken language.
Reason The child's past experience of hearing and speaking his language is the launching pad for learning the skills of reading and writing. The school builds on this basic foundation of spoken language. New insights from psycholinguistics can assist teachers to provide more effective ways of helping children to become more aware of those aspects of speech which

are important in understanding and controlling their own language behaviour. In alphabetic language, such as English, the phoneme segment of speech is the fundamental unit of the written code. But research from several countries, including Britain, shows clearly that the child has no conception of the segmentation of speech (Downing 1974).

9 *Greater use of applied linguistics: 2 Writing*
Prediction The application of psycholinguistics in the teacher's professional knowledge of how written language operates is the second aspect of the recommendation predicted in the previous section.
Reason The essential concern of teachers helping children to learn reading and writing skills is to lead them to understand how written language works. One vital goal in the initial stage is to develop the child's concept of coding as such, and to help him to perceive how the specific code for his language operates. Unfortunately, the written code for English phonemes is very complex and this tends to obscure its essential alphabetic nature. The Schools Council Report suggests that traditional orthography is a serious cause of failure in the initial stage of literacy acquisition (Warburton and Southgate 1969). The Bullock Committee is not likely to endorse any modified medium or signalling system for beginning reading, but it surely will suggest that more schools should be taking special steps to protect children from the confusion which is caused by the complexity of English orthography.

10 *Greater use of applied linguistics: 3 'structure' in the teaching of reading*
Prediction It is likely that the Bullock Committee will suggest the need for more structure in the teaching of reading. There is some danger in this because 'more structure' may be misinterpreted as meaning a return to formal phonic methods.
Reason What is required is an improvement in teachers' understanding of structure in written language and the application of this knowledge of structure in planning children's school experiences of reading and writing. In other words, this greater stress on structure should come within the teacher's bank of knowledge. It should not be made explicit in formal instruction, because this would undermine those excellent current practices described earlier in this article which are so valuable in helping children to conceive the true purpose of literacy.

11 *Improved communication with parents*
Prediction Bullock will probably reaffirm the need for better communication between schools and parents regarding the teaching of reading.
Reason The crossnational research which is the foundation for this article indicates clearly that the actions and attitudes of parents constitute a very important variable in the child's development of reading and writing skills.

12 *Revision of the concept of 'remedial reading'*

Prediction It seems likely that the Bullock Committee will call for a re-examination of the traditional concept of 'remedial reading'. It may even suggest some new directions in the treatment of children who are having difficulties in learning to develop adequate skill in reading. Bullock may propose yet another committee to consider this special problem. It is extremely unlikely that Bullock will give any encouragement to treatments based on speculative theories about 'developmental dyslexia'.

Reasons Increasing dissatisfaction regarding the term 'remedial reading' is being expressed among professional teachers who specialize in helping children to overcome unusual difficulties in their reading education. There is a general feeling that new logical frameworks should be sought for this special problem. The causes of reading failure are legion, and the interactions between this multitude of variables are highly complex. The rather disappointing results of current methods of treatment are a source of nagging doubts about how this problem is being handled today. Unfortunately, the lack of theoretical development and related applied research in reading education leaves the door open for all kinds of speculations from people who, though they may be quite well qualified in their own discipline, are patently ignorant of the psychology of learning and child development. It seems a pity that teachers have not developed a professional organization sufficiently strong to protect children from some of these unqualified clinicians.

Summary

If this optimistic forecaster were granted twenty-one magic wishes he would ask that all nine strengths should be safeguarded and all twelve weaknesses be reformed. If he had only nine wishes, he would choose to keep the nine strengths and make no changes. Those strengths are a national asset. If this optimistic forecaster were allowed to ask for enough wishes to choose those changes which would have the greatest effect on children's experiences in learning to read, he would request three additional wishes corresponding to the first three items of weakness (i.e. low academic status of reading, poor teacher training in reading, lack of reading education in junior and secondary schools). The greatest advance in reading education will be made if the Bullock Committee supports better teacher training in reading education and the extension of deliberate provisions for improving and maintaining the skills of reading and writing into junior and secondary schools. But these changes will be halfhearted if they are not accompanied by the recognition of reading education as a proper subject for academic study and research at the university level.

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Part 2
Language and reading

3 Neglected linguistic principles in the study of reading

David Crystal

Despite a certain impression to the contrary, there is no such thing as a linguistic 'approach' to the study of reading — in the sense of a specific technique derived wholly from the theories, methods and empirical findings of general linguistics. The role of linguistics, in my view, is more general and also more fundamental than this: it is to inculate a state of mind, to provide a set of principles which can shape our attitude towards specific problems, and which, because they come from a coherent scientific framework, can inspire confidence when it comes to suggesting solutions. What principles, then, seem to be of particular significance? This paper concentrates on three: the notion of language variety, the view of language as an integrated set of levels, and the idea of ordered stages of linguistic development.

Language variety

The view that there is no such thing as a single, homogeneous entity — language — is now well-established. Language is a composite phenomenon, constituted by a range of dialects, styles and specialist uses, generally referred to under the heading of *varieties* (see Crystal and Davy 1969). Two closely-related implications of this view immediately emerge: the principle of appropriateness, and the principle of autonomy of purpose. The idea of appropriateness is widely recognized in language-teaching contexts — the view that there is no single, universally-correct use of language, that acceptability depends primarily on seeing any language use in relation to its purpose (colloquial speech for informal situations, specialist terminology for scientific discussion etc). We all now accept that there are differences between the speech habits of children of different socioeconomic backgrounds and geographical areas (though whether these differences are sufficiently great to warrant their being called distinct 'codes' is highly debatable). What is less well-established is the corollary of this view — that each variety has to be judged in its own terms, and its function not confused with any other. This is a principle underlying the *Writing Across the Curriculum* Schools Council Project, for example (see Martin *et al* 1973), which emphasizes that the function of writing is to be seen in a different perspective from that of speech. To see the one merely as a reflection of the other may be reasonable in terms of formal structure, but is confusing as regard function. To see writing as an alternative to speech and no more, obviously invites the question, 'Why bother to write, then, if I can speak?' And it is presumably this confusion which underlies the query of the child who, having returned from a nature ramble and being told to 'write about it', asked 'Why? It's much easier to tell you.' What has not got across here, it would seem, is the view that writing can do what speech cannot do, e.g. make thoughts permanent, precise, transmittable over distances, allow the extra dimension of colour, layout and size etc. This view — and its corollary, that speech has a role that writing can never perform — *must* be got across, however, if awareness of *why* languages have varieties at all is to develop, and be the basis of more sensitive judgments and discriminations at a later age (such as those investigated in Doughty *et al* 1971).

The distinctiveness of the varieties of language is even more marked when we look at them from the formal point of view. It would in fact be quite inaccurate to see adult reading and writing as being a reflection of speech, as suggested above. Most people are aware of this as a general emphasis, of course, and can point to the differences in vocabulary and the colloquialisms of syntax — contractions, tag questions, etc (e.g. *isn't, can't be*) — in support of their view; but it is rare to see a full awareness of the *extent* of the difference. This is primarily because people operate with a relatively formal conception of speech. The really informal, colloquial kind of conversational language — which is the kind that children are exposed to most of the time before school — is not generally illustrated in textbooks, and it is not easy to become objectively aware of it. The main reason for this, one supposes, is that it is methodologically difficult to find out the facts about it. Obtaining samples of spontaneous speech for linguistic analysis is a specialist technique, and it is not easy to devise ways of getting at conversational English of a maximally informal kind without the speaker's awareness of the recording situation interfering with his spontaneity and colloquiality. But more information is becoming available, and it points up the differences mentioned above (see Crystal and Davy 1975, Dickenson and Mackin 1969). In syntax, for example, there are the many 'comment clauses' (see Quirk *et al* 1972, 11.65 *ff*) which play a major part in organizing the progression of thought in a dialogue — *you know, you see, mind you, it's fair to say, believe me*. These can be overused, but cannot *in principle* be criticised as being merely markers of nonfluency. They have a specific role to play and follow strict grammatical and semantic rules. *You know*, for example, changes in meaning as it changes its position in the sentence:

1 in initial position, with high rising intonation, e.g. *you know, I think we ought to . . . .*
2 in medial position, e.g. *I've just been to the shops — you know, the shop on the corner*

3 in final position, with low rising intonation, e.g. *I've just been talking to Mrs Jones — you know.*

1 has a primarily stylistic role: it is an informal, intimate way of introducing the topic. 2 has a semantically clarifying role — the speaker becomes aware as he speaks of the need for clarification, and introduces this by the phrase *you know*. It is as if he says, 'What I have said so far is unimportant — it is *what follows* that should be paid attention to'. 3 adds the assumption of concealed information: the speaker is assuming that his listener knows something about Mrs Jones, just as he does!

Grammatically, too, colloquial speech has its own rules which have to be followed if the conversation is to sound natural and acceptable. Even *you know* follows the rules: for example, it is only used initially in statements; questions, commands, and exclamations with *you know* sound distinctly odd, e.g. *you know, shut the door; you know, is it raining?* But this is just one syntactic area of colloquial importance. Other areas would be the use of tag statements (e.g. *He's a nice chap, John is*); relative clauses attached to sentences (e.g. *He won the race — which surprises me*); and inverted word order for emphasis (e.g. *On the ship I said we'd meet him*). Perhaps most important of all is the tendency to avoid complex sentences, with multiple subordinate clauses, and instead to string together clauses into loose sequences using conjunctions, comment clauses, and so on, so that often it is extremely difficult to define in traditional terms where one sentence ends and the next begins. Here is an extract from a storytelling session, to illustrate the point:

> (/ indicates intonation units, – indicates pauses. The full extract is transcribed in detail in Crystal and Davy 1975, extract 5)
>
> /yes I remember/ there was a terrible/ story/ – horrifying story/ that was told by a colleague of mine/ when I used to teach/ years ago/ – who erm /this chap lived in erm – a semidetached house/ and next door/ – there was a man/ who'd just bought a new car/ – and he was telling me/ that one morning/ he was looking through the window/ – and this man/ allowed his wife to drive the car/ very unwisely/ and she was having a first go in it/ – and he backed it/ out of the garage/ – so that it was standing on the driveway/ – and he'd closed the garage doors/ – and – she came out of the house/ – to take this car out/ and go shopping for the first time/ – so . . . .

This sentence (as defined in traditional terms) continues for another half a page before one can be sure that it has finished. In written English, of course, sentence-boundaries are rarely a problem. We may write:

John came; and the clock stopped.
or
John came. And the clock stopped.

and depending on which way we choose to write it, so we know how to analyse it, as one sentence or two. But in speech, the intonation and rhythm of both these examples may sound exactly the same. Speech is analytically more ambiguous in this respect. Or, to put it another way, speech does not need to make the same range of linguistic distinctions as writing does. I leave it to other speakers to ponder the implications for the study of reading. One implication is presumably that speech cannot be seen as a *basis* for reading development, but rather as a parallel skill, whose features can act as a framework for assessing the *kind* of linguistic difficulty that a given child has shown himself able to cope with. Nor can it be assumed that fundamental linguistic notions such as *sentence*, or *word*, or *left-to-right* progression, are going to be self-evident to a child upon encountering the written medium, as there is considerable indeterminacy about them when we search for their existence in speech.

Integrated account of linguistic structure: the importance of intonation

Perhaps the most important linguistic feature distinguishing speech from writing is the prosody of the former, compared with the punctuation of the latter. This is another point which is widely recognized, but whose significance is missed because the extent of the difference is underestimated. Punctuation, and the other visual variables of type size, layout, spacing and colour, is only a pale and partial reflection of the prosodic system of the language. The operative word here is 'system'. It is easy to forget that the melody, loudness, speed and quality of our speech, which seems so smooth and unstructured, is in fact the result of a highly complex set of formal contrasts, such as low falling pitch, high falling pitch, low rising pitch etc. It is not so easy to define and illustrate these variables as it is for the segmental (vowel and consonant) features of our sound system, but the contrasts are there, and a great deal of recent work in linguistics has gone into showing what they are (see Crystal and Davy 1969, Chapter 2, Crystal 1973 includes some examples on tape). Incidentally, they seem to be the earliest features of a language to be learned by children.

One reason why it is important to see intonation in relation to other aspects of linguistic structure, and not to minimize its role, is due to the function it has in the teaching and evaluation of reading. The concept of successful reading aloud is crucially dependent upon it, as is the notion of intelligibility in the provision of good models for imitation. Word by word reading is generally held to be unsatisfactory, if used for too long; but the only difference between this and the more acceptable phrase-, clause-, or sentence-unit reading is in the intonational or rhythmic cohesion which the reader can give it. And if a child is not aware of the role of intonation in this respect, or of the corresponding organizational role of punctuation, major difficulties can develop which it later takes a great deal of time to eradicate. A common example of this difficulty stems from the mismatch between grammatical and line boundaries, which unless anticipated, causes inevitable problems. Layouts such as:

They went for a ride
on a pony. The next day . . .

will be predictably read as

'They 'went 'for 'a ride/ –
On 'a 'pony the 'next 'day' . . .

with the main emphasis in line 1 on ride, with a falling tone followed by a pause. The error may be interpreted by the teacher as one of comprehension, and it may have repercussions which permeate several lines; but basically the difficulty arises out of formal linguistic considerations, and is not essentially a problem of comprehension at all. At the end of the first line, the child has to do one of the most difficult reading tasks of all, namely, find the beginning of the next line. While his eyes move, there is a pause, and the pitch of the voice will tend to fall. The first line's syntax is also a possible complete sentence in English, so it is not surprising if the reader assumes that the sentence has come to an end, and treats the second line as a new sentence, with raised pitch and new prominence. The whole of the second line will then be read as the beginning of a single new sentence, unless the child's attention has previously been drawn to the two graphic phenomena which show that it is not, namely the fullstop and the capital letter. If awareness of these is not present, there is little chance of any self-correction taking place until further down the page.

This is no isolated example. Another very common error is in cases like:

'I want to go,' Janet said. 'I will come too,' said John.

The predictable difficulty is that the child will tend to pause after *go*, and then treat *Janet said* as going with the next sentence. *Said John* is then left in the air, or linked with the following sentence — and so the error grows. Once again, it is the mismatch between intonation and punctuation, induced through a lack of awareness of the latter, which causes the difficulty.

A further kind of example of the importance of intonation lies in its role in making sentence patterns acceptable which would otherwise not be so, due to a deviant or rare sentence structure. A classic example is:

One little,
Two little,
Three little kittens.

This, unless read with the appropriate 'bouncing' nursery-rhyme intonation and rhythm, produces an impossible grammatical structure for English:

One/ little/ two/ little/ three/ little/ kittens/.

There are many such cases:

He saw toys and toys and toys.
I can eat caps (said the goat). I shall eat caps.
May I have a coat, a little coat for my doll?

Order of linguistic development

This last type of example leads to my third linguistic principle, the relationship between norms of linguistic development for speech and for reading. The focus of our attention here should be on grammar, which has been by far the most neglected level of language structure in reading studies. The tradition of study has given plenty of time to vocabulary enrichment and to the relationship between pronunciation and spelling, as the controversies over phonics, look and say, ita etc indicate. But grammar is the central organizing principle or structuring process in language, without which sounds, no matter how well spelled, and words, no matter how well recognized, remain isolated units, a disorganized juxtaposition of noises and ideas. Grammar relates sound to sense and provides the only real measure of developing linguistic ability (the point is developed in Crystal *et al* 1975). For the teacher of reading, then, it would seem crucial

1 to be aware of the level of grammatical ability attained by a child, in order to see whether the grammar of the materials being presented is within the child's capabilities
2 to be able to criticise the grammatical standards of reading materials for realism and adequacy.

To implement the first point means becoming aware of the way in which the child's development of speech manifests a stable order of grammatical features. Children do not acquire the grammar of their language randomly. They learn their language at different speeds, of course, depending on their backgrounds, environments, and personal skills; but the evidence from the language acquisition studies of the 1960s (summarized by Brown 1973) is that the *order* of the various structures is approximately invariant for all children. At least seven broad stages can be isolated (the chronological ages are averages only; there is of course a considerable scatter of children both ahead and behind these norms who would fall within any notion of normalcy).

1 A one-element sentence stage, from about nine to eighteen months e.g. *there*, *daddy*
2 A two-element sentence stage, from about eighteen months to two years e.g. *want biccy*, *daddy there*, *where pussy*.
3 A stage in which most of the sentences contain three main elements of

structure, from about two to two-and-a-half e.g. *Where that ball? Daddy gone car, Give mummy shoes.*

4 A four-element stage, containing all the main elements of the adult sentence, from about two-and-a-half to three years, e.g. *Me give you that car, What daddy doing that for?*

5 A stage from about three to three-and-a-half where the basic multi-element structures learned so far ('clauses') are combined into longer and more complex sentences, using conjunctions and similar devices, e.g. *Daddy kick the ball and it go in there.*

6 A stage from about three-and-a-half to four-and-a-half when the 'local' errors remaining in sentence patterns tend to be sorted out, and the complete grammatical systems established, e.g. the pronoun system, tense forms, irregular forms, auxiliary verbs. Compare a typical three-and-a-half year old sentence, *her be going*, with its four-and-a-half year old equivalent, *She is going*.

7 A stage from five till puberty, during which a few residual irregular patterns are learned, more complex patterns of sentence structure are developed (e.g. linking sentences with adverbs, e.g. *actually* . . .) and the comprehension of more subtle contrasts in grammar and meaning established (e.g. the difference between *ask* and *tell*, *promise* and *tell* etc — see Chomsky 1970).

These stages, given here in a highly abbreviated form, are discussed and illustrated in detail in Crystal *et al* (1975). Using a developmental ordering of this general kind — and remembering to pay attention to the detail as well as to the outline of development — it is possible to 'place' a child in terms of his syntactic development, and decide how far above or behind his group he may happen to be. It is then a pedagogical task to find reading materials which do not overtax his syntactic ability, by making him read structures which he has not yet learned in speech. (A little later, reading and writing can be used as a means of extending and experimenting with syntax, and developing a child's linguistic ability in general. But in the early months of reading, it seems pedagogically unsound to attempt to introduce the reading skill if there is going to be persistent interference from unfamiliar syntax. This lesson seems to have been learned in connection with the choice of vocabulary, but it has not yet become universal in syntax). Rather, the structures common in speech should be allowed to emerge whenever possible (i.e. without attempting to turn reading into 'visual speech' as argued above) to reinforce the visual structures and provide a control against presenting too alien material. The *Breakthrough to Literacy* sentence maker and similar ideas would seem to be the most valuable in this connection.

The phrase 'alien material' may seem strong, but it exists, at least for syntax. The second desideratum mentioned above for the teacher of reading concerned the criticism of the structures found in reading materials, and — at least in traditional materials — there is a great deal that can be criticised. Examples of nonEnglish structures would be:

What have you in the shop?

which is a pattern no longer in general use (though it was common enough in Elizabethan English) or

One little kitten runs to the basket.

where the initial *one* is awkward (unless it is intended to make a contrast using intonation, i.e. *one* kitten, not two), and the simple present tense form is unreal unless a sports commentary implication is intended! A third example is:

A small red jug stood next.

And there are many more which in isolation may seem trivial, but put together produce an artificial kind of English syntax which the teacher must be on guard against. There is nothing particularly odd about *I see a book and a pen* or *I see a table and a desk*; but when it develops (under some misguided sense of grading complexity) into *A book and a pen are on a table and a desk*, and so on, the pervasiveness of the artificiality becomes more evident.

There are signs that linguistic principles such as those outlined in this paper are being borne in mind by more and more people involved in the professional study of reading. The detailed application of these principles in the production and evaluation of materials, however, has hardly begun. This conference is called 'Reading; What of the Future?' For my part, I trust that a feature of this future will be a more systematic awareness of the structure and function of language by teacher and theoretician alike. It is time to follow the example of the foreign-language teachers and speech therapists, and make a linguistically-principled perspective routine.

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4 Language and literacy: spontaneity and contrivance in the learning-teaching situation

Joyce M. Morris

In previous papers (Morris 1972, 1973a, 1975), attention was focussed on major impediments to progress in eradicating illiteracy and generally raising literacy standards in the United Kingdom. Suggestions for removing these impediments were also outlined. In particular, those which stem from widespread failure to recognize that teachers of literacy, and authors of literacy materials, need certain kinds of *explicit* knowledge about the English language and linguistic processes if their respective contributions are to be effective.

Needless to say, many important matters could not be covered or even mentioned in these three necessarily short papers. Accordingly, encouraged by the ensuing discussion, this paper continues the theme begun three years ago, and with the same provocative intent.

The 'trigger' words chosen for the present discussion are 'spontaneity' and 'contrivance' when used in connection with learning and teaching the language arts. In recent years, they have come to have emotive overtones in the literature and in educational circles generally. 'Spontaneity' is associated with child-centred, progressive education with the accent on freedom, instincts, interests and all that is considered 'natural' to the developing child. Consequently, spontaneity is something approved, whether it be in children's conversation, creative writing or whatever. In contrast, despite its mainly laudable connotations in reputable dictionaries, the word 'contrivance' tends to be connected with reactionary elements, and is often employed as a term of censure especially in judgments about the texts of basal reading schemes. Thus, in an educational context, it is rarely used to mean something planned, designed and executed with knowledge, skill and ingenuity to meet specific needs or objectives. Instead, its usage generally implies something against the 'laws of nature' whatever they may be; something mechanical, artificial and even deceitful in intent or practice.

All this would not matter much if words and their currently popular meanings were simply abstractions from reality with no real power to influence present and future educational practice. As it is, we know from the history of education and our own past experience that commonplace words, promoted with special meanings to our professional vocabulary, do exert a tremendous influence on what goes on in the classroom. Moreover, from time to time, certain words become fashionable whilst, occasionally, new ones are invented. In consequence, they overshadow or obscure, at least for the time being, the importance of other long-established concepts such as those associated with 'systematic teaching' as opposed to 'discovery learning'.

This phenomenon can and sometimes does have unfavourable repercussions on the development of English language skills in our schools. Hence, the primary reason for my choice of topic within the continuing thematic framework mentioned at the outset. Also, my reason for setting out to demonstrate (albeit sketchily because of the space factor) that, without a great deal of contrivance on the part of school teachers and authors of resource materials, children cannot realize their full potential for literacy. In other words, except in the special circumstances of encouraging pupils to express themselves orally and in writing, it is contrivance rather than spontaneity which is the key concept for success in the learning-teaching situation with regard to the beginnings of literacy acquisition.

Of course, this statement is intentionally provocative especially to leading 'progressive' educationists who, with few exceptions and after considerable opposition, have now publicly conceded the need for structure in the teaching of reading and writing. But who, nevertheless, continue to be most vociferous in rejecting the notion of contrivance with which the concept of structure has much in common.

Hopefully, my line of argument will contribute a little towards conscious acceptance of contrivance as a 'must' for teachers and for texts concerned with the development of children's mastery over the written language. That is, contrivance of a kind based on *specialist* knowledge drawn from various academic disciplines, notably linguistics and educational psychology. For, after all, there is comparatively little carried on in the name of education which could not be broadly described as 'contrived'.

To this end, it would seem appropriate to begin by pointing out that great artists, writers, composers and inventors of every description have been and always will be among the world's arch-contrivers. Therefore, teachers who instinctively and somewhat irrationally dislike the idea of being 'contrivers' might be persuaded openly to accept this role in the knowledge that they are in good company.

Cognitive confusion at the preschool stage

Be that as it may, let us consider why contrivance based on specialist knowledge is so vital to ensure that all 'educable' children make a good start and subsequent satisfactory progress on the road to literacy. First, imagine the cognitive confusion of preschool children who, without assistance from literate, interested parents, try to make sense of the English writing system as they see it in their home and neighbourhood environment. If you have not made a linguistic analysis of food labels, street names, television captions and so on, you may not be aware that they draw on the full resources of the English language, at least at the level of phoneme-grapheme correspondence where English is at its most difficult compared with other languages whose writing systems are also based on the alphabetic principle. This, incidentally, is one of the reasons why the estimated two million 'functionally' illiterate adults in Britain need the provision of appropriate teaching and adequate resource material for which some of us have recently helped to launch a national 'Right to Read' campaign (BAS 1974).

Cognitive confusion in the school situation

Now let us consider how this cognitive confusion of underprivileged five year olds is compounded when they start school.

A rich reading environment

In reception classes, the children will usually be surrounded by visible words, and more and more words as the weeks go by. There will be notices giving directives such as 'Please wash your paint brush and dry it well. Put it in the tall jar.' Messages will be pinned up for the attention of those engaged in or wanting to take part in make-believe and dramatic play, for example, 'Shop open. Hospital. Please be quiet.' Weather charts will indicate whether the day is 'wet, windy, foggy, warm, cold' and so on. The nature table, models and artwork will be suitably captioned. Whilst, in the book corner, there will be titles and texts containing the most extraordinary words, phrases and sentences. An inevitable result of children's writers not only drawing on the full resources of the English language, but of them tending to be particularly inventive with regard to usage and the introduction of new linguistic forms including nonsense words. Consider books by the popular Dr Seuss for example.

This partly accounts for the special qualities of children's literature. It is also one of the main reasons why, despite the very important role of children's literature in the educative process, it is not generally suitable as didactic material for beginning readers and writers struggling to master basic decoding and encoding skills.

A declared objective of the 'rich' reading environment thus provided, and naturally more varied in vertically-grouped classes, is to familiarize infants with the idea that our writing system is a means of communication through visual symbols. Certainly it achieves this purpose as the teacher constantly draws attention to what the classroom words convey, and regularly reads stories from the book corner pointing here and there to the verbal content whilst doing so. In this way, children also learn gradually how context clues can be helpful in identifying the written word.

Nevertheless, a 'rich' reading environment can leave children very confused about sound-symbol correspondence in English, thereby fostering in them a growing conviction that they will never learn to read effectively and or spell accurately. That is, unless teachers engage their pupils in activities so contrived as to ensure they begin the complex process of internalizing a model of the orthography. Further words such as 'reading, writing, letters and sounds', which Reid (1966) and Downing (1970) have confirmed by their researches as being a prime source of confusion to five year olds.

Children's names

The practice of making children's own names the teacher's first written contribution to them can be and frequently is another source of cognitive confusion. This is abundantly clear when one analyses the names on an infant class register, and asks individual class members how they know which is their name followed by a request to write it from memory. These tasks are relatively easy for infants with names like 'Bob' and 'Ann'. But how difficult they are for the average five year old called 'Sheila' or 'Michael' and, for example, Pakistani children with names such as 'Rafique' and 'Munazza'. As for surnames, our writing system provides special forms of homophones, and this linguistic feature can also bewilder the young learner. For example, children whose surnames are 'Lowe' or 'Ladd' have to learn that the same word-sounds do not have the final 'e' and 'd' in the written adjectival and noun forms respectively.

Language-experience approaches to literacy

Provided that teachers realize the disadvantages as well as the advantages of this practice with children's names, the chances are that all will be well. The same is true of language-experience approaches to literacy. These were advocated in the Plowden Report (1967) but not in sufficient detail to prevent misunderstandings especially as, at that time, there were no comprehensive, published discussions about them by British educators. However, since then, this situation has been remedied in so far as Goddard (1974) has clarified what language-experience approaches involve in her recent book on the subject.

Briefly, language-experience approaches are based on the concept of children learning to read and write through their own spontaneous interests. In their 'purest' form, the initial stages of learning to read are conducted through the medium of children's own oral compositions recorded by their teachers. In their 'most contrived' form, they involve published materials such as those of *Breakthrough to Literacy* (Mackay *et al* 1970) which, among other things, provides a core vocabulary, and allows children to manipulate the printed word and to express themselves in print before they have acquired handwriting skills. The correct use of its 'sentence maker' also helps pupils to understand that, in English, word order is crucial for meaning. Its 'word maker' too, if used properly, gives them some knowledge of word structure.

However, admirable though language-experience approaches are when employed by knowledgeable, industrious teachers, there is no getting away from the fact that they are only 'starters'. By their very nature, they do not go far enough in helping children to see pattern and order in the English writing system. Accordingly, at some point, teachers who use them must introduce published or home-made materials which are so contrived as to clarify still further the nature and uses of the written language.

Basal schemes

Teachers who understand the nature of the learning task through *explicit* knowledge of the English language and linguistic processes will naturally select materials which give systematic, maximum support to young learners striving to make sense of the writing system. They will recognize the need for highly-contrived resource material, and will probably elect to use apparatus of this kind, e.g. *The Programmed Reading Kit* (Stott 1962).

If knowledgeable teachers also decide to use one or more of the well-known, basal schemes with a predominantly 'look say, incidental phonics' approach they will do so hopefully to give their pupils further experience of the type of verbal content which the latter have already composed themselves. That is, content which generally does not use the language structures found in children's literature and information books. Moreover, such teachers will not be bamboozled by author's claims that their basal texts incorporate children's 'natural' speech or 'oral language patterns'. In fact, continuous written language is rarely, if ever, exactly like speech as leading authorities continue to stress. For example, in discussing the difficulty of creating on paper an image of even the most 'ordinary' of 'actual language', Quirk (1968) makes the following statement:

> A threefold distinction has to be made between kinds of 'usage': *actual usage*, *believed usage* and *perceptive usage*. The forms that a person in fact uses are often different from what he believes he uses, and these in turn may be different from what he thinks he *should* use. It is 'believed usage' that a writer usually puts on paper to represent natural English. Or else he abstracts from speech, or from *some* speech, features which seem particularly striking and which he takes to be the essence of speech.

Of course, all this is not to deny that initial literacy materials should take account of the sentence patterns commonly found in the speech of infants and other young children. Indeed, at this point, the intention is to simply indicate why there is no real justification for describing the books in any basal scheme as 'natural language texts'.

Contrivance in basal texts

The English writing system is complex. But it has order and consists of a number of linked systems which are endlessly fascinating to study. Children need all the help they can get from teachers and resource materials to discover this order among complexity, and hence to become effective readers, writers and spellers. As already stated, the nature of the learning task is such that they need teachers who are 'arch-contrivers' willing to use highly-contrived materials in the interests of their pupils' progress even though, at first sight, such materials conflict with prevalent notions about 'natural' language and spontaneity.

Language in Action (Morris *et al.* 1974) exemplifies some of the highly-contrived resource materials which the writer believes to be necessary for the satisfactory development of oracy and literacy. Detailed study is recommended to correct any understandable yet erroneous first impression that, for instance, it is just a 'reading' scheme with a 'phonic' approach in the traditional sense of both terms. It is also suggested that any appraisal of basal texts should begin by accepting that all are necessarily 'contrived' and hence, the crucial questions are 'how' and 'for what purpose'.

Here it might be useful to mention a few of the ways in which the verbal content of basal schemes is contrived. First, educational writers with a predominantly look-say approach to reading have naturally tended to place their emphasis on differences in word shapes and the use of a controlled vocabulary. They have usually also insisted that early reading material should be related to the vocabulary usage of young children. For example, the senior author of the well-known *Happy Venture Reading Scheme* (Schonell 1939) was still making the following statements in the fourth, revised edition of his influential book *The Psychology and Teaching of Reading* (Schonell 1961):

> Early reading material should contain common words of different visual patterns which will help the young reader in his difficult task of discrimination. (p. 15)
>
> One of the most significant modern advances in the teaching of reading has been the use of a controlled vocabulary of common words in early reading books and the consequent repetition of words used. (p. 98)
>
> Planned reading material for the first stages of reading from printed material should be related to the child's vocabulary. (p. 21)

In contrast, the authors of *The Royal Road Readers* (Daniels and Diack 1954) played a major role in the British movement towards a more widespread, adequate recognition of the alphabetic nature of our written language. Accordingly, their basal texts are firmly based on the concept of graduated phonic difficulty.

More recently, Reid and Low (1973) have pointed out that their basal texts 'do something most important: they use the syntactic patterns found to be common at the age of five or six and omit those found to be rare or absent. This means that they omit, in the early stages, structures which belong to the language of books (such as "Slowly down the road came an old man").'

Thus the language 'style' of basal texts varies with the purposes and, of course, the talents of their authors. As such, it should be judged in relation to the learning-teaching task whose successful execution it is designed to assist, and not simply as writing which might be described as 'contrived, unnatural, stilted' and so on. After all, as Turner (1973) has stated 'Any style might be justified if a purpose is found for it.'

Unfortunately, critical comments about basal texts often stem from fixed ideas about children's interests and, therefore, the type of verbal content to which they should be exposed. For instance, Schonell (1961) comments on the artificiality of sentences found in phonic readers like, 'The red hen is in the pen.' Then he goes on to say, 'Such material is not related to the pupil's interests, activities and everyday experiences and can have little real attraction for them.' Paradoxically, however, he recommends phonic practice in the form of rhymes constructed by the teacher as follows:

> Spot, Spot
> fell in the pot
> and got hot.

Obviously Schonell, like other leaders of the 'natural language, spontaneous interest' school of thought had to admit that children need opportunities to practise the linguistic method of contrast on monosyllabic words which are a salient characteristic of basic English vocabulary. Certainly, in the writer's view, most young children will not make satisfactory progress with reading and spelling unless they use some resource material which focusses their attention on words in this way. That is why the foundation phase materials of *Language in Action* (Morris *et al* 1974) are unashamedly contrived with the help of professional children's writers working to linguistic briefs.

We have received evidence that contrivance and spontaneity can go hand-in-hand in unexpected ways to bring a special bonus. This is illustrated by the following quotation from a letter recently received from a teacher. Writing about *Language in Action*, and referring specifically to a sentence in one of the books, she says:

> Speaking for myself, I find new aspects to chuckle over each time I open a copy of any of the books, and my mainly 'disadvantaged' children do the same. We now have a standard phrase when anyone is unhappy — 'And sad is Nat, the big fat cat.' It works wonders!

In the writer's view, less talk about 'spontaneity' in the field of language development and more 'contrived' action would work wonders too. Hopefully, the reader will agree or, at least, concede, that there is a good case for 'contrivance' as the key concept in the learning-teaching situation with regard to the acquisition of literacy.

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5 Phonographic cues in learning to read

J. Fergus McBride

In order to assuage any emotional storm which the title of this article might arouse, I shall state, as clearly as possible in a few words, my position as far as learning to read is concerned in order that the cerebral activity may be concentrated upon the topic and unhelpful emotional concomitants eliminated.

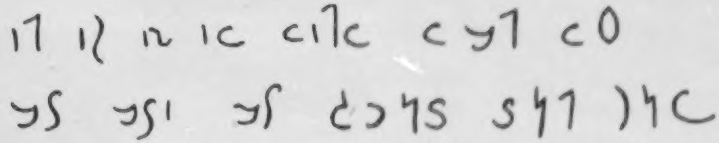
The position taken is that:

1. reading is a complex process in which, through the medium of print, meaning may be communicated from mind to mind, provided that the reader brings the necessary skills and experiential knowledge to the operation.
2. throughout the process, the reader is continuously making predictions as to the form and content of the message, which are continually verified, modified or rejected. These predictions are at the phonographic, syntactic and semantic levels.
3. such is the redundancy of written language that the reader only samples some of the information available to make the predictions and to verify them.

Such a theory is eclectic in the sense that it incorporates most elements from previous theories and 'methods'; for example, phonographic (or 'phonic') cues are used when necessary, though these are used more by the learner than by the experienced reader; whole words, and series of words, may be predicted from context clues and sentence patterns are structured to fit the growing corpus of understanding. Understanding itself is not just the end product but also the growth point of the complex body of vicarious experience.

To be able to read written material, knowledge of the oral language, for example vocabulary and sentence patterns, are not enough by themselves; for instance, try to read this piece of English written in Shaw's Proposed British Alphabet:

Figure 1



Knowledge of the code, i.e. the sound/symbol 'bonds', is not enough either without knowledge of the oral language. Making sounds is not sufficient:

Figure 2

Berit letar hon med
Men hon kan inte se

Now look at this piece of writing from a motor car manual, 'If any side play can be detected between the top and bottom king-pin trunions and the king-pin bearing or stub-axle unit, the king-pin bushes must be worn.' We cannot read this without adequate experiential background, and for anyone without a knowledge of the meanings of the various technical terms, to read this passage is not just difficult, it is impossible.

I have stressed that phonographic cues are a *component* of the reader's repertoire of skills; the degree to which they are used at the various stages of the development of reading competence has yet to be determined.

Many teachers and educationists (not all) are apprehensive of even the discussion of 'phonics' and with some justification if this should mean a swinging back of the pendulum to some of the synthetic 'mechanistic' approaches of the past with a consequent neglect of other components of the complex skills which comprise reading. I believe the children need to acquire an adequate body of phonographic knowledge in order to make progress in reading. I would stress that this knowledge is necessary, but not sufficient. This assertion, which is fundamental to my philosophy of teaching reading, is based *inter alia* upon the following foundations.

First, the alphabetic nature of a writing system. The insight of those ancient Egyptians and Phoenicians (phoneticians!) that spoken language could be divided into a small number of elemental signs, which in turn could be represented visually by a small number of written symbols, is one of the greatest insights in the development of human civilization — beautiful in its simplicity and more significant perhaps than the invention of the Arabic numerals. (The Chinese and some far Eastern civilizations are still struggling with ideographic and logographic systems of writing.)

We inherited this writing system modified by the Greeks and Romans, and in the process the sound-symbol relationships have become complicated or obscured, especially by the changes which were brought about by the fixation of spelling following upon the invention of the printing press. Nevertheless, as we shall see, English is written phonemically, for the most part.

Time and space do not permit a wider survey of the research which has been carried out on the effectiveness of reading approaches which incorporate the development of phonographic knowledge. I can only refer to the classic work of Chall (1967) reported in *The Great Debate*. Chall reviewed the available research on the topic between 1910 and 1965. Any attempt to summarize in one paragraph findings of this huge undertaking must necessarily be selective and oversimplified, but her conclusions are an endorsement of the incorporation of a systematic attempt to enable children to acquire phonographic knowledge in teaching reading.

In this country, perhaps the most researched question in education during this century has been that of the effectiveness of Pitman's ita, which is an attempt to raise the consistency of the phonographic relationships in traditional English writing. There is considerable doubt as to the advantages of using ita in the long run (Fyfe and Milne 1973), but the one unequivocal finding (Southgate and Warburton 1969) which no one has queried is that children learn to read the more consistent writing of ita more easily than they do the conventional writing system. The significant variable being studied here was the consistency of the phonographic relationships. It would seem that by facilitating the acquisition of phonographic knowledge, whatever the approach, we are enabling children to make better progress in the initial stages.

So far we have been considering the question 'Why teach phonics?' or 'Is phonic teaching desirable or necessary?' The question I really want to consider is 'What phonics shall we teach?' Other questions such as 'When shall we teach them?' or 'How shall we teach them?' must wait. Teaching phonics in my definition means enabling children to acquire associations between the elemental sounds and the written symbols of English. When one refers to authorities on reading and to the reading series which do incorporate 'phonic' components we find such confusion of technique and content that one would wonder if 'phonics' has ever really been adequately tried out. Indeed, recommendations as to what phonics to teach and how to teach them are, for the most part, based upon arbitrary decisions. Perhaps, we have not given 'phonics' a fair chance!

In one particular respect, those who have devised sequences of phonic elements for teaching have been particularly at fault. I refer to the arbitrariness with which authorities select the phonic knowledge which they prescribe as the content for teaching. A principal question should surely be, 'What is the basis upon which we shall select the sound/symbol relationships which shall be most useful to the learner-reader?' The following criteria are possibilities:

1 The ease with which the children acquire the phonographic relationships (learnability).
2 The frequency with which these relationships occur in materials which children will be called upon to read (usefulness).
3 The consistency with which the relationships occur (reliability).

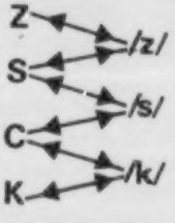
Before we can consider such questions, however, we must have a description or a blueprint of the way in which the sounds and symbols *are* related in English. Such a precise description will also answer the questions as to the 'alphabetic nature' of English writing. At Moray House College I have been working on such a description.

It was necessary first to draw up a list of graphemes (or written symbols) of English, i.e. groups of letters which consistently go together and are associated with one sound (or phoneme) e.g. th, ch, ie. We had a list of sixty-five graphemes (often called 'letters' or 'digraphs' in educational literature). We then drew up a list of phonemes of English (the RP list modified slightly to meet what might be called the Received Scottish pronunciation). The list contained forty-five phonemes.

Lee (1970) had done some work on these lines as have Hodges (1966) and Venezky (1970). Lee, for example, took the phonemes of English and worked out the frequency with which these were represented by various graphemes. This was an analysis of 'how sounds are spelled' rather than an analysis of 'how symbols are spoken'. Lee then proceeded to use this information to assess the consistency of the writing system for the *reader*. But irregularity of spelling is not to be equated with irregularity of reading; for example, the writer has the choice of representing the /s/ sound by *c* or *s* but the reader has the choice of /k/ or /s/ for letter *c*.

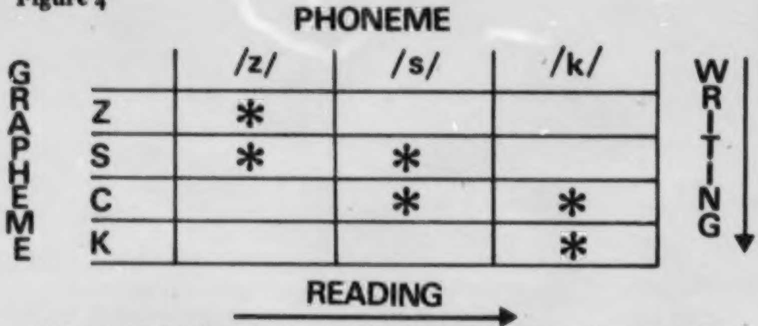
In the past, investigators have usually made analyses of phoneme/grapheme relationships *either* in spelling *or* in reading. Let us look at the way in which the letters *k*, *c*, *f* and *z* are related to sounds.

Figure 3



Vowel symbol-sound relationships form even more complicated chains. By using a matrix, however, we have a clear and immediate picture of relationships both in reading and in spelling, e.g.

Figure 4



	/z/	/s/	/k/
Z	*		
S	*	*	
C		*	*
K			*

Using this technique (and assisted by computer) we produced a matrix consisting of sixty-five rows by forty-five columns, i.e. almost 3,000 'cells', each containing the frequency of occurrence of each grapheme in conjunction with each phoneme. The list of words used was that of Burroughs (1956). This description provides:

1 The relative frequency of occurrence of various phonemes and graphemes in English.
2 The consistency of any grapheme/phoneme relationship for both reader and writer.

The question arises of course as to the functional value of a knowledge of these phoneme/grapheme 'bonds' to the learner-reader. Clearly, many associations occur so infrequently as to be of little predictive value and other associations are so inconsistent that their usefulness is highly questionable. In order to attempt to determine the relationship between phonographic skill and reading ability we constructed tests containing what we found to be the most frequent and most consistent phonographic bonds. These tests were given to over a hundred children aged eight to ten years who were experiencing difficulty in learning to read in Edinburgh. We found that the correlations between phonographic knowledge and score on Burt's word recognition test to be of the order of 0.7, indicating a concomitant relationship between phonographic knowledge and ability to read as measured by the Burt test. Since the spread of age and intelligence of this group was small we have found grounds for believing that the relationship is causal and that phonographic skill is a necessary if not a sufficient component of reading ability for these children. The subsequent description of the phonographic relationships between written and spoken English of different varieties will form the basis of that component of teaching which has been so loosely termed 'phonics' and which has been more loosely applied as well as a basis for analytic or diagnostic tests of those phonographic cues which are necessary for learning to read. Two important questions still remain to be answered however:

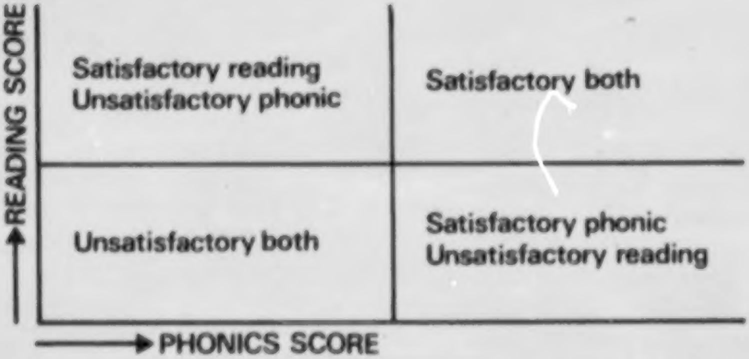
1 When should a child be encouraged to learn phonographic bonds?
2 At what stage is he ready to acquire these associations?
3 How can we assist the child to acquire phonographic associations?

Having determined what the phonographic associations are, however, we are in a better position to decide when and how to encourage the child to acquire them.

From the study of scattergrams on which the children's scores on tests of phonographic knowledge were plotted against scores on reading tests, the following conclusions were clearly justified:

1 No child had a satisfactory score on the reading test who had *not* a satisfactory score on the test on phonographic knowledge.
2 Some children had satisfactory scores on the 'phonic' tests but did not score satisfactorily on the reading test.
3 Most children had satisfactory scores on both tests or unsatisfactory scores on both tests.

This can be shown diagrammatically:



This could be summarized by saying that phonographic knowledge is a *necessary* but not *sufficient* component of reading ability.

Space and time precludes a full description of the phonographic relationships available to the reader and writer but it is readily available in the 3,000 cell matrix. Since the last twenty-two symbols in order of frequency account for less than 3 per cent of the material studied, these would not seem to have high priority in the teaching programme. On the other hand, the rarity of occurrence of these graphemes gives them added significance and just as vitamins are essential for life though minute in quantity, so these distinctive graphemes may collectively be the most significant features for recognition of words. This question needs further study.

It is interesting to note that the first five graphemes in order of frequency make up to one third of the material in our word sample. The first ten make up to 58 per cent of the material, the first fifteen 73 per cent, the first twenty 82 per cent, the first twenty-five 87 per cent and the first thirty 92 per cent. The law of diminishing returns applies.

Consistency

By the consistency of the association between a grapheme and a phoneme I mean the percentage of occurrences of the grapheme which are in association with the phoneme with which it is most frequently associated. For example, the symbol *th* has 37 per cent occurrences associated with the voiced /th/ as in /this/ and 63 per cent occurrences with voiceless /th/ as in /things/, so its consistency is 63. The consistencies of the thirty most frequently occurring graphemes are as follows:

Figure 6

96–100	16	66–70	–
91– 95	–	61–65	1
86– 90	1	56–60	1
81– 85	4	51–55	1
76– 80	1	46–50	–
71– 75	2	41–45	3
	24		30

This count does not take into consideration the additional 'locational' cues which are often available, for example, *y* at the beginning or end of a word, *e* occurring finally, or *c* followed by *e*, *i*, *o*, *a*, or *u*. It is worth noting that consistency varies from almost 100 per cent, as in the case of *k* and *f*, to 44 per cent, but often additional cues raise the predictive level very considerably; for example, the location of *e* in the final position.

To sum up, it would seem that:

1. A small number of graphemes (about thirty) account for the greater part of the written material children are called upon to read.
2. The differences in frequency of occurrence of the various graphemes and phonemes and the consistency of grapheme-phoneme relationships should be taken into account when considering the question of priority in the teaching of phonographic cues.
3. The consistency of phonographic associations in English is generally high.
4. Children who have succeeded in learning the 'mechanics of reading' have acquired a substantial fund of phonographic knowledge, and those who have failed to reach an adequate standard in reading are deficient in phonographic knowledge.

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Part 3
Intelligence and reading

6 Reading and intelligence - an integrating theory

Desmond Swan

In education as in psychology subject-matter constantly confounds distinctions. What has been set apart must always be brought together again, and this seems to be as true of ways of thinking about reading and intelligence as of other related constructs. Whether because it is easier for the human mind to handle one concept at a time than two, or because of the existence of separate tests, this one labelled intelligence and that one labelled reading, we seem to have set a distance between the two that is often misleading. This paper attempts to tease out the relationship between them in the hope of reintegrating them for purposes of both theory and practice, in a common framework.

There are several rocks and shoals to beware of in this kind of task. Firstly the danger of reification — of endowing abstractions with an unwarranted degree of reality. The human sciences always seem to carry that risk. Secondly, the danger in studying reading itself, that a single less important subskill may be treated as representing the whole complex process. Indeed, whether dealing with reading or with intelligence it is too easy to forget that operationalism entails compromise. A portmanteau concept like intelligence is susceptible of so many interpretations which may not coincide, that communication is difficult. But while one readily sympathizes with the many psychologists quoted by Butcher (1968) as finding it an anachronistic construct, it still seems to be considered inconvenient to dispense with our intelligence completely!

Let us examine what has happened in the course of the past few decades. It seems as though psychologists no less than teachers have found it difficult to get reading and intelligence into clear focus. 'Reading *is* thinking' was Thorndike's cryptic definition, whereas Flesch advised, 'Teach the child what each letter stands for and he can read', while Stauffer (1969) cited Betts as preferring to see reading as, 'the reconstruction of the facts behind the symbols'. In short, irreconcilable definitions abounded, emphasizing the sensory, the linguistic and the cognitive elements by turns. Was reading a 'psycholinguistic guessing game' as Goodman (1968) maintained? Was it simply 'like solving a problem in mathematics' à la Thorndike (1917)? Or was it best thought of as 'the cognizing of semantic units', to use Guilford's jargon? Or, in the formula beloved of test constructors, could it be 'none of these'?

Turning then to those who attempt to measure what others attempt to teach, there is a theoretical problem and a practical one. The first one was how best to predict reading performance. Gates (1935) advocated the Binet-type test, but de Hirsch, Jansky and Langford (1966) found this worse than eleven other predictors at junior-school level. What about nonverbal tests? They would not be contaminated by quirks of language. Both Kellmer Pringle and Neale (1957) and Hage and Stroud (1959) found them to show the lowest correlation with reading score, while Morris (1966) found no significant correlation between nonverbal intelligence and reading growth. In fact, Bliesmer (1956) found the Durrell-Sullivan Reading Capacity Test a better predictor than the Binet.

The related practical problem was the question of how much of reading success or failure is caused by high or low intelligence. Ravenette (1968) cites surveys of headteachers in Kent (Morris 1966) and Newham, a majority of whom felt that general ability was the major determinant of reading achievement. As against this, Farr (1969) pointed out that intelligence may not be the most important factor in learning to read, while Wilson (1967) went so far as to hold that 'as a cause of reading disabilities, low intelligence is suspect'.

But to deal with this specific question immediately, it seems that a theory of multiple causation of reading disabilities (plural) would now find the widest agreement. These disabilities are seen as resulting not from any single cause but from a constellation of facilitating or inhibiting factors whose relative strength may vary from person to person. Usually a single factor will become functional only when it bears a certain relationship with other predisposing ones (*cf* Burt 1937, McDonald 1967, Watts 1967). This of course suggests that the relationship between intelligence and reading is neither uniform during childhood, nor a simple one, and that other things, organic, emotional or environmental, may be of critical importance.

In fact, the whole question of how reading and intelligence interact was but one current in a sea of larger polemics. There was the capacity-achievement controversy, particularly prominent in the fifties and sixties; the nature-nurture disputation, happily still with us; the whole protracted discussion about the unitary or multiple structure of intelligence itself; and lastly the question of whether any valid distinction could be drawn at all between measured intelligence and scholastic achievement. Burt's (1937) argument by analogy that a pint jug can hold no more than a pint of milk, seems to have given ground to the more prosaic notion that any distinction between intelligence and achievement was no more than theoretical; that in fact they are 'as inseparable as form and substance' (Wesman 1945), or, in the words of Cook (1950) 'that intelligence tests are simply achievement tests of a special type, from which intelligence is inferred'. Nevertheless, there remained some further questions:

1 If intelligence tests are simple achievement tests of a kind, why do measures of home environment, for instance, show systematically

different, and usually higher correlations with, say, reading score than with IQ? (Fraser 1959, Wiseman 1964). If measured IQ is less subject to modification by environmental or motivational factors than is achievement, then some such distinction may need to be maintained.

2 How do we account for the increasing correlation between reading and IQ scores as the child's school career advances? This finding by Manolakes and Sheldon (1955) was confirmed by Bond and Tinker (1957), Fransella and Gerver (1965) and Ravenette (1968 p. 29) despite the contrary findings by Schonell (1942). In fact it seems as though the factorial content of reading and/or intelligence shifts systematically during the years of growth, so that the role of intelligence becomes increasingly important as the role of perceptual factors diminishes (Singer 1970).

3 If, as Wechsler and others held, overall measured intelligence along with each of its subordinate abilities declines steadily from the early twenties onward, what about the findings of Iliffe (1964) that some middle-aged students do as well at university as recent school-leavers, and of Sanders (1963) that 'retention of capacity in the social sciences and literature continues well after middle age'? Weschsler had pointed out that different abilities had varying rates of growth and decline; but was it possible that some abilities could in fact go on *improving* throughout maturity and into middle age, given the right conditions? This very notion was indeed suggested by P.E. Vernon two years ago, and had already been empirically supported by the findings of Horn (1967) in a study of the effects of aging on intellectual performance, though this study was cross-sectional rather than longitudinal.

4 Cattell (1971) adduced evidence that brain injury may affect performance on one subtest of a general IQ test, while leaving others untouched; again he cited Hebb (1942) to the effect that certain abilities may recover from brain injury which occurs after maturity more easily than from similar injury occurring before maturity.

The theory which most nearly seems to fit these questions is in fact Cattell's (1971) theory of the structure of intellect. Briefly, it maintains that ability becomes organized into two general intelligences (which have been shown to be factorially separable), each of them representing the operation of a relatively independent set of influences on its growth and history. Both of them, fluid general intelligence (Gf), and crystallized general intelligence (Gc), represent some combination of hereditary, physiological and cultural influences; but whereas the cultural predominate in Gc, it is the physiological-hereditary influences that predominate in Gf. Operationally Gf is the capacity for new conceptual learning and problem-solving prior to formal education. It is an adaptability which may be invested in the learning opportunities encountered, depending on motivation, and is best measured by tests that minimize formal scholastic content e.g. tests of inductive reasoning about letter or number series. Gc, on the other hand, is a precipitate out of experience, consisting of the 'collection of skilled judgments a person has acquired by applying his fluid intelligence to his school opportunities' (1965, p. 304) and is measured by traditional tests of scholastic achievement. In fact in the Horn study already quoted it was Gc that continued to grow beyond the age of sixty whereas Gf declined from the early twenties onward.

Clearly one would expect reading achievement, once established, to correlate highest with other tests of crystallized abilities (though with a small loading on fluid intelligence) and this deduction is borne out by the evidence from at least six studies (*cf* Butcher and Lomax 1972).

Recently at University College Dublin this Gf/Gc theory was used as the rationale of one aspect of a large-scale survey of reading and some of its correlates (Swan 1974). The subjects were a grade sample numbering 3,377 children, while the tests used were the well-known NS6 test of reading comprehension (NFER 1954), representing Gc, and the less well-known Birbeck 1 (Cavanagh 1960), a test of inductive reasoning which was used as a test of Gf; the available evidence indicates that they would reasonably well test these areas. The survey findings were examined *post factum* to test the appropriateness of this rationale, with the following results.

Hypothesis 1

Since the increase in Gf during the teenage years was found by Cattell and Horn (1966) to be steeper than the increase in Gc, it was hypothesized that our reasoning test scores would correlate more closely with age, than would our reading test scores. Our correlations $r = -0.2978$ (Birkbeck 1) and $r = -0.2699$ (NS6) did show a significant difference ($P<0.01$), thus upholding this hypothesis.

Hypothesis 2

As we have seen, Cattell maintains that motivation may have, 'a powerful effect on the generation of crystallized from fluid intelligence' (1971 p. 492). We had a measure of our pupils' attitudes to reading and compared the mean reading scores of those with favourable as against those with unfavourable attitudes, whilst holding their range of reasoning scores constant.

Table 1 Mean reading levels of high and low attitudes scorers within a given range of reasoning test scores

N	*Attitude Score*	*M NS6 Score*	*Birkbeck 1 range*
291	>20 (High)	25.7 (SEm=0.69)	<12
230	<20 (Low)	22.9 (SEm=0.55)	<12

$\bar{m}$ Difference 2.8 * $P<0.01$

The significant difference in favour of the favourable attitude group was taken as upholding hypothesis 2.

Hypothesis 3

In the nature of this theory one would expect that measures of the pupils' home environment would correlate more highly with Gc than with Gf. Two measures of environments were used: fathers' occupational status and estimated number of books in the home. Table 2 illustrates the findings here.

Table 2 Correlating measures of home environment with reading and reasoning test scores

Measure of home environment	*Correlation coefficients with*			
	NS6 (GC)		Birkbeck 1 (GF)	
	Pearson	Eta	Pearson	Eta
Occupational status	0.30	0.32	0.26	0.27
Number of books in the home	0.35	0.36	0.28	0.32

As the differences between the corresponding pairs all exceeded the level ($P<0.05$) required for a one-tail test of significance, and were in favour of the correlation with the test of Gc, it was taken that home environment was more closely related to Gc than to Gf. The evidence from this enquiry, therefore, seems to bear out the validity of Cattell's Gf/Gc dichotomy.

This theory offers a helpful rationale for reconciling the antinomies in our knowledge about intelligence and reading, including discrepancies in particular individuals' performances. In particular the fact that it allows for a growth in certain reading-related achievements throughout adulthood is important in view of the evidence adduced. It therefore enables us to integrate our understanding of reading with other aspects of cognitive functioning.

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Part 4
Early reading

7 Methods - the way ahead

W. Keith Gardner

Introduction

The history of the teaching of reading has been dominated by methods which have been designated alphabetic, phonic, or look and say. In recent years, a growing interest in the development of language and its relationship to the acquisition of reading has led to the formulation of approaches based on principles derived from a study of linguistics, and on generalized ideas stemming from a belief that reading can be treated as a transposition of concepts attained through oral communication — normally classified as language experience. In Britain, the use of a 'pure' method is rare. Usually teachers tend to favour an approach which combines methods, and the most common pattern is:

1. A preliminary period of acquiring a sight vocabulary using a graded reading scheme or elements from two or more such schemes.
2. An introduction of some simple 'phonic' rules combined with practice in 'sounding' and 'blending'.
3. A supplementary and supporting use of language experience, often linked to the development of writing.

A reasonable comment on this situation is that teachers evolve their own method in course of time.

The purpose of this paper is to suggest fresh guidelines which, whilst not denying freedom to the teacher, might bring greater effectiveness to classroom action.

Can there be 'a method' of teaching reading?

The short answer is no. Indeed, this is the first lesson to be learned. So far as we can predict at the present time there is no possibility of evolving any system that guarantees success, and the search for a perfect method is doomed to failure. Furthermore, efforts to improve classroom practice based on our present concepts of method are likely to be disappointing. The reason is quite simple. 'Look and say' has never really evolved as a method. It has become a system of structuring reading vocabularies so that children respond accurately to a selected sample of printed words. Not enough attention has been paid to the way in which recognition takes place. It has accepted too easily assumptions about frequency, familiarity, and repetition and has tended to ignore perceptual processes. Equally phonics, as they are treated in the classroom, too often rest on an oversimplified idea of the way in which the signal system of letter sequences works. Add to this the inbred conflict between those who believe in sight methods and those who advocate sound methods, and the climate is hardly suitable for a reasoned reappraisal.

If 'the method' cannot be found, what is the alternative? It seems more profitable to analyse the development of reading in such a way that methods can be evolved which are related to quite specific aims. In other words, rather than seek a method of teaching reading, there should be concentration upon refining the means for establishing certain behaviours in children which are essential for effective reading. This statement merely makes explicit what some teachers are trying to do in the classroom. Theorising about the teaching of reading will be of more use to the teacher if we become more conscious of the process and less concerned with global method.

Analysing the process

First a very simple framework is needed. Before children can learn to read they need certain information about the task. This can be reduced to three rules:

1 Writing is ordered in a left to right sequence.
2 Spaces between groups of letters represent the boundaries of words we use when we speak.
3 Letters and sequences of letters are arranged to signal *approximations* to the sounds we make when we speak. (I insist on 'approximations' because even if one considers only variations in dialect the range is considerable.)

Given that a child is alerted, or cued, to the rules of the game, the next stage is to consider three further developments:

1 The attainment of strategies for recognizing printed words.
2 The gaining of experience which enables a reader to predict the purposes of a writer, and adopt a suitable reading stance relative to these purposes.
3 The achievement of an increasing capacity to interpret and, if necessary, evaluate the messages encoded by a writer.

These statements encapsulate the total task facing a child who is at the beginning of learning to read. Whilst they may conceal many of the complexities in attaining effective reading, it is essential to keep some such clear analysis in mind when one is thinking about methods, if for no other reason than it would be fatal to adopt early procedures which proved to inhibit later development. In particular, it is likely that a fixation on global word recognition techniques like look and say or phonics may delay the process of gaining reading strategies, and the flexible reading stances so essential if a reader is to find real interest and profit in reading.

The next task is to relate this very brief analysis of a developing capacity for reading into a series of submethods. Clearly, within the limits of this paper, only a model can be presented.

Early reading

Under this heading only the three preliminary rules of the game would be included:

1 directional attack
2 identifying groups of letters as words
3 letters and letter sequences are signals.

The first two rules present little difficulty. For the majority of children sitting with a teacher, sharing a book, using a finger as a pointer, make up an adequate method. The rules are taught by example, and clarified by discussion. The third rule, however, is a little more complex. One method used is to make up a story about a little girl which begins like this:

> Mary was a little girl who used to have very strange dreams. One night she dreamt she was standing at the door of a huge castle.
> She pushed the door and it opened, so she went inside. Suddenly she saw a sign. It looked like this. (I show a card: *STOP*). The sign told her to stop — and she stopped. Then the sign changed (I show a card: *GO*). This sign told her she could go. She walked to the foot of some stairs and there she saw this sign (*STOP*). What must she do?

We went on to decide how she knew when to stop and when to go. Soon we were talking about letters, and I had to give the letters names — so my method developed. I chose to name letters rather than try to make sounds because this was more accurate and easier to handle. Letters have names and functions. Before long we were looking at a number of signals in the classroom and the children were alert and observant. Notice that it is not necessary at this stage to establish any direct relationships between letters and sounds, we merely wish to begin looking for signals. Nor are we bothered about whole word patterns. We are just opening our minds to the fact that there are signals around us to interpret.

This is not the only method of making the first rules of reading explicit, and all that is suggested here is a need to build up a sequence of activities that provide a learning experience for children related to short-term outcomes. This is the pattern for building up better methods.

Word recognition

Once children know the rules of the game, then a start can be made on methods that enable them to recognize words in print. I have never understood why look and say and phonics have always been presented as alternatives. Surely in both cases children are looking and saying. What differed was the unit of analysis. Look and say offered the whole word as a unit; phonics offered a letter or group of letters as a unit. Hence all word recognition is a matter of looking — finding clues — and saying.

If this is accepted then a method of building up word recognition must concentrate on making the looking accurate, and the finding of clues fruitful. Moreover, it should be remembered that word recognition in a context is simplified when the reader is able to predict probable sequences of words. So, rather than a method of establishing word recognition there must be a number of methods based on visual perception, linguistic experience and the ability to foresee outcomes.

Making looking accurate can be analysed in two ways. First, there is the question of the competence of children in discerning and identifying the differences between letters. Second, there is the application of this competence in a way that provides reliable information for decoding.

Children must now learn a further rule. The orientation of a shape in space is critical when we look at letters. For example b d p are not the same thing in different positions, as would be assumed from our normal perception that position in space does not alter an object, but they are different objects with different properties. Without this knowledge the children will be confused by trying to find the 'difference' between b and d.

Their ability to notice fine distinctions between f and t, m and n and the like must be checked. It may well be that progress cannot be made without allowing children ample opportunity to handle solid letters in wood or plastic. The development of method here consists of the ordering of matching, sorting, and classifying activities.

Given that the children are able to observe and differentiate between the letters of the alphabet, then swift progress can be made in enabling the growth of word recognition techniques. The children are already recognizing some words. The development of method consists of building a bridge between the inadequate strategies children already possess, which enable them to recognize a limited number of words, and the gaining of variable strategies that result in effortless decoding.

It seems that a grave fault of much look and say teaching is that it does not direct the attention of children to letters, and letter sequences. From the beginning, reading teachers should hold a continuous dialogue with children centred on the question, 'How do I remember the words I see around me?' This dialogue can lead to systematic word study. The 'words I know' can become the models for recognizing the fresh words encountered.

One approach is to set the task of building up word families, from the reading vocabulary, frankly recognizing that variation does occur. Once children have met 'how' and 'slow' then future words containing the 'ow' can be classified. e.g.

how
now
flower
cow
bow

slow
know
bow
owe

Already 'sound' signals are introduced, not as phonics but as a function of studying words. In this way, the approaches designated look and say and phonics come together. Children are given a mechanism for finding what letters signal through examining the words they read.

This, in itself, is not enough. Word study only deals with words as labels. Children must have the opportunity of gaining experience with words within the environment of sentences and paragraphs.

The main obstacle to doing this in a great deal of modern practice is the sterility of the texts we offer to children. They are designed to foster word recognition purely by word by word attack, and the opportunities for using expectancies of language and meaning are limited. An improvement is needed in the variety of early reading experience, and the linking of materials more closely to learning objectives.

Reading strategies

This is normally considered a part of advanced or mature reading. But methods of teaching reading should recognize from the beginning that the learner is called upon to perform different tasks related to differing reading situations. In most classrooms young children are asked to read stories, work from assignment cards, acquire information through reading. But there is clearly room for more system and precision. For most children the required reading stance is set by 'hearing children read' which standardizes a word by word, page by page, book by book approach. The main need is for a clear method of developing an active response from the reader which encourages flexibility. At the simplest level this would probably be little more than a discussion of different ways of reading. Later, reading assignments can be structured so that different demands are made. Such devices as using a list of contents, understanding alphabetical order for using dictionaries and reference material, can be introduced very early and be utilized with growing frequency.

Reading comprehension

It is a common experience that as children master word recognition, their capacity to find meaning and make inferences from their reading does not always progress sufficiently for them to obtain satisfaction from reading. Once again, attention should be directed to methods which promote comprehension.

With young children, the most fruitful line of approach may be to rehearse in spoken dialogue the kind of activity a reader must pursue for himself when he is locked away in lonely isolation with a book. Reading aloud to children can be structured in such a way that a communal experience replicates the solitary thinking of a reader.

Not all reading aloud to children should be adopted for this purpose. Rather, a method of beginning to develop ways of handling reading likely to improve reading comprehension should evolve from this common classroom activity. What is required is a careful selection of materials and an analysis of key responses to these materials.

In particular, care needs to be exercised in the range of questions put to children. An analysis of the questions teachers ask children seems to indicate that there is a heavy emphasis on literal understanding, or the immediate recall of facts, with much less attention to inference and evaluation. Correction of this kind of imbalance welds activity with method.

There is also a need to develop materials and activities which transfer oral comprehension to actual reading situations. Comprehension exercises are not always effective. What are the alternatives? There are a range of possibilities extending from the use of cloze procedures through the careful precueing of reading, to strategies based on the SQ3R formula. The way ahead for methods is to bring some order into these approaches to the problem.

8 Why not ita?

Douglas Pidgeon

It is now nearly thirteen years since ita was first introduced into English primary schools. Since then its use has spread to most parts of the English speaking world and even beyond, for it has been found to be equally effective in teaching English as a second language, teaching beginners, remedial groups and adult illiterates. Probably no other educational innovation has been researched so much with consistently positive results or been reported upon so favourably by tens of thousands of teachers who have used it. Why then has it not been universally adopted for teaching reading? Why are so many teachers, educational advisors and others apparently set against it?

While it is the intention of this paper to examine the many objections raised, it is appreciated that this task must be carried out in a wider context. ita is, of course, only one of a number of possible initial learning mediums (ILMs) designed to overcome certain difficulties that it is claimed are inherent in our traditional orthography (TO). Those who oppose or resist the use of ita, therefore, can be divided into two basic groups. On the one hand, there are those who see no need for any ILM either because they do not recognize that TO presents any special difficulties for the learner, or because they feel that although the difficulties exist, they see no advantages in an ILM and believe the difficulties can be overcome by appropriate instruction in TO. And on the other, there are those who are fully appreciative of the need for some kind of ILM, but remain unconvinced that ita is the best solution. There is, of course, a third group — those who have not taken the trouble to examine the evidence or consider the issue.

Before examining the reasons for and against the use of ita *per se* therefore, it is important to look at the wider question of whether or not an ILM is needed in the beginning stages of learning to read the English language. In order to demonstrate such a need, it is necessary to show that TO does present difficulties for the beginner that amount to a genuine handicap which, if removed, would lead to an improvement in the ability to learn to read. Note that the improvement referred to here is concerned only with the beginning stages of learning to read and not with the development of all of the skills involved in the full process. This distinction must be made clear, since there is no implication that there are no further reading skills to be learned after a child is fluent enough to be transferred from an ILM to TO.

There are three different approaches which might be used to discover whether or not an ILM is required. First, comparative research can be undertaken comparing the difficulties encountered in learning to read English with those associated with other languages having a much closer correspondence between the written character and the spoken sound. Second, an analysis can be made of the relationship between the written and spoken forms of different languages and the problems encountered in learning to read them. Third, an ILM can be introduced and in a controlled experiment a study of whether or not any improvement in learning to read can be undertaken.

The first of these approaches would seem to offer the most direct evidence. Unfortunately, no *empirical* studies comparing children's learning to read in different languages have, as yet, been carried out. While IEA (the International Association for the Evaluation of Educational Achievement) has introduced the empirical element into comparative education, in reading, as with the other subjects so far studied, their research has been concerned with trying to disentangle the factors associated with performance at later ages, and not at all with the initial learning processes (Foshay *et al* 1962, Thorndike 1973). IEA did, however, set up a small committee consisting of Jeanne Chall, Marie Clay and Eve Malmquist, which has put forward a proposal, now up for funding, to carry out a crossnational study of the early stages of learning to read. The difficulties of conducting such a study were not underestimated and the research design includes the control of such variables as age and reading readiness at the start of school, characteristics of the school systems, including time devoted to reading instruction and the methods and materials used and the circumstances of the children's cultural, social and economic environment, as well as the nature of the language used for reading instruction. One of the main hypotheses which it is hoped to test is, 'Beginning readers will make faster progress the greater the degree of letter-sound correspondence in the language they are learning to read'. Another is that, 'There will be an interaction between the methods used in initial reading instruction and the nature of the language the children are learning to read'.

While there may be some promise from empirical crossnational studies in the future, it is clear that for evidence of the relationship between the grapheme/phoneme regularity of a language and the ease of learning to read, resort must be made to the more traditional approaches of comparative education. What is implied here is not the collection of national statistics or a review of the various methods and materials used in different countries, but rather a detailed study of a specific phenomenon — in this case the learning to read process — in a variety of countries having different languages. The concern in this paper is with the early stages of learning to read English. In order to demonstrate, therefore, that this task could be simplified if a more regular ILM was adopted, it is necessary to show that English TO has a particularly poor grapheme/phoneme relationship and that the task of learning to read a language is easier and quicker the greater the consistency between the written and spoken forms of it. It is appreciated that demonstrating these two points from comparative data will not prove the need for an ILM conclusively, but it certainly provides strong supportive evidence.

It should hardly be necessary for an English audience to be reminded of the inconsistencies and irregularities of English orthography, but there are undoubtedly many teachers in this country who are unaware of the relationship which exists between the spoken and written forms of a language, and where English stands in comparison with others.

The English writing system is alphabetic as opposed to the syllabic systems of Japanese Kana and the logographic system of Chinese. Each character in Chinese indicates a morpheme or unit of meaning, and each character in the Japanese Kana script represents a complete but discrete syllable of sound. The purpose of an alphabetic system, however, is that each character, or letter, should signal a specific unit of sound or phoneme. English has about forty phonemes (depending upon dialect or accent) but there are only twenty-three effective letters to represent them (c, q and x are in fact redundant). The Roman alphabet may have been sufficient for Latin, but it was seriously inadequate even for Anglo-Saxon, let alone modern English. While it works well enough for Italian and Spanish, it is quite hopeless for English which, over the centuries has absorbed a profusion of words and phrases from invaders, neighbours and others. Including the alternative forms of written characters (upper and lower case, cursive etc), the necessity of employing numerous diagraphs to signal phonemes for which there is no single character (ch, sh, ng, th etc) and the profusion of alternative spellings for single sounds (as in eye, high, pie, guide, aisle, guy, find etc) Ellis, in 1845, estimated that more than 2,000 graphemes were used to represent the forty or so phonemes of English. Add to this the falsely implied relationships indicated by many graphemes (as the o in so, do, one, gone, done, women etc) and it is not to be wondered that most English children, who have learned first to react to the auditory cues of their language, find the task of learning to interpret the visual cues an extremely baffling one.

The fact that other languages have a much more consistent grapheme/phoneme relationship also hardly needs to be stressed. The variation, however, is quite wide. Arabic, Greek, Russian and the Japanese Kana scripts are fairly consistent as in Finnish, Philipino, and Spanish using Roman letters. At the other end of the scale, the relationship is relatively poor with French, Danish, and of course English, with Dutch, German and many other languages fitting at intermediate points along the scale. Accepting, therefore, that there are variations, the point of concern is whether learning to read is any easier with a more regular alphabet than with one having many inconsistencies and irregularities.

While other writers have studied learning to read in certain foreign languages compared with English (e.g. Preston 1952, Hildreth 1965, 1968a, 1968b) Downing (1973a) has attempted to bring together 'the reading behaviours of people in different cultures and in varying languages . . . (in order to) . . . understand better the fundamental psycholinguistic processes of reading and writing and the way in which these develop'. He discusses the views of both linguists and educators on the relevance of the perceived regularity of grapheme/phoneme relations in alphabetic writing systems. Many linguists support Lado's (1957) statement that 'the more regular the fit, the easier it is to learn the writing system once we know the language: English writing is particularly bad as to regularity of fit'. Others like Hall (1961) claim that English spellings are not wholly random, 'they fall to a large extent, into certain subsets which are consistent within themselves'. As Downing (1973b) points out, however, 'the real issue in the psychology of the learning to read process is the *perceived regularity of the code*. The linguist's regularity may be far too complex a system for the child to *perceive* as such.'

So far as educators are concerned, Malmquist (1973) says, 'The English language with its great differences between the spoken and written forms, makes the teaching of reading much more difficult than it is in many other languages, for example, Swedish.' Sakamoto and Makita (1973) say, 'This very high rate of literacy in Japan may be attributed to the . . . initial use of phonetic symbols, Kana, which are easy to learn.' Downing (1973b) summarizes views from many nations by saying, 'The general consensus of people concerned with the practical problems of teaching literacy to young children is that the more consistent the relations between the written and spoken forms of a language the easier it is to learn to read and write.'

The third approach for discovering whether or not an ILM is an advantage in learning to read English is to introduce one, experimentally. Schemes put forward for consideration have either retained the existing alphabet unchanged, but have introduced aids to a reliable system of word decoding and encoding through the addition of diacritical marks (e.g. Fry 1964 and Johnson 1965), or the use of colour in some form (e.g. Gattegno 1964, Jones 1967 and Bleasdale 1966), or they have augmented the existing Roman alphabet by adding characters in order to regularize the grapheme/phoneme relationship (e.g. ita and Distar).

Research in this area has been largely confined to ita. Fry (1966) compared his diacritical marking system with ita and TO and found few significant differences between them. Unfortunately, as in many studies of this kind, method and medium were mixed and hence no firm conclusions can be drawn from the results. It is interesting to note, however, that wherever this has happened, while the ILM has often been shown to be superior, only rarely has TO come out on top. Jones (1965, 1968), for example, has reported results demonstrating the superiority of his Colour Story Reading over TO.

So far as ita is concerned, Block (1971) refers to over seventy studies in which the medium has been compared with TO, and reports that in approximately two-thirds the ita children performed at a higher level, in one third there was no significant difference, and in no study was TO shown to be superior. Undoubtedly, however, the most thorough review has been the evaluation for the Schools Council by Warburton and Southgate (1969). For those who have not read this report thoroughly — and that means probably about 98 per cent — it should be pointed out that both authors, but particularly Warburton reviewing the research results, bent over backwards to be scrupulously objective and fair, which meant that they frequently added qualifying riders to statements or findings which otherwise favoured ita. The final conclusion from the researches was 'the balance of evidence favoured ita.' Much has been made of the fact that *some* researches have shown that TO taught children catch up. Warburton (1969) summarizes the evidence on this point:

> . . . it is important to remember that in many cases the differences observed were in favour of neither ita nor TO. Before the transition *all* the significant differences reported were in favour of ita, but after the transition ita was the superior medium in about 50 per cent of the cases, TO in 5 per cent and in the remaining 45 per cent no significant differences were found.

That some TO taught children catch up later is irrelevant to the question being discussed here i.e. that TO is an obstacle in the beginning stages; it could arise from a variety of factors including the fact that reading beyond the beginning stages is not taught at all or very badly taught. Learning to read more easily and more quickly is sufficient in itself, and as Warburton (1969) says:

> There is no evidence whatsoever for the belief that the best way to learn to read in TO is to learn to read in TO. It would appear rather that the best way to learn to read in TO is to learn to read in ita.

In the light of the arguments and evidence referred to here, it is very difficult to sustain any belief that TO is not a major obstacle in the initial stages of learning to read, or that the disadvantages of learning to read directly in TO are so insignificant that nothing is gained by using an ILM. Despite the last quote from the Schools Council's report, Warburton and Southgate draw the inevitable conclusion of researchers that even more research is necessary. Particularly, they stress the need for 'setting up a large-scale experiment in which a number of different approaches to beginning reading are compared'. Their report was published in 1969 and one does not need to be a clairvoyant to know that is most unlikely that this experiment will ever be carried out.

No claim is being made here that the use of an ILM will automatically solve all reading problems; merely that the evidence is now irrefutable that it will remove one major obstacle confronting children beginning to learn to read English, thus allowing both teachers and researches to concentrate on other important aspects.

Should the ILM be ita? The view adopted here is that any attempt to systematize TO for initial learning is better than none. But since ita has many advantages over other suggested systems — such as, for example, its use in free writing and with the more informal individualized approaches now in vogue in primary schools — it is relevant to examine briefly some of the voiced objections to its use. In fact, this exercise has been well carried out by Pitman (1973) who examined twenty-five objections that have been raised at one time or another against ita, and Downing (1974) discusses some nineteen reasons for not using it. The two lists have much in common but Downing notes what he calls two 'factual' disadvantages of ita: first he points out that ita reveals the weaknesses of pupils, teachers and schools, since its use by any child indicates a lack of progress which is not immediately apparent with children using TO. Second, he notes the difficulties which the organization of schools into infant and junior can bring. This is by no means an insurmountable obstacle, but it is real in the sense that if a receiving junior school does not, or will not use ita, then infant teachers may feel they cannot use it either.

The rest of Downing's 'disadvantages' are described as 'attitudinal' since they arise from negative attitudes towards ita which are, for the most part, based on little, if any, factual evidence. Weeks (1972) has, in fact, demonstrated from a survey of both ita and TO infant teachers that there are distinct attitudinal differences between them, and he confirms quantitatively, 'the presence of feeling against ita on the part of nonusers'.

There is not space here to discuss in detail the reasons which have been put forward over the years by those not wishing to use or support ita — reference can be made to Pitman or Downing for these. What follows is an abbreviated list of the major objections, divided for convenience into four groups. When considering the nature of the objections and the factual evidence pertaining to them, they certainly appear more like excuses and it is not difficult to see how they stem from a particular attitudinal position. Readers may care to select those statements which support their own particular attitude.

The first group are mostly voiced by those who appear to doubt the value of any ILM, but direct their attention to ita because it has been most researched upon:

1. Its effect fades and the TO child catches up.
2. Its success is all due to the Hawthorne effect or the enthusiasm of the teacher.
3. There are many other methods which, if applied properly, will get as good, if not better, results.
4. It only succeeds because of the publicity it has been given.
5. It is a gimmick to make money for publishers.
6. Extravagant claims have been made for it and good teachers do not need it.

The second group of objections are raised against ita itself:

7 It could be improved; it is not perfect.
8 It is unnatural — a synthetic approach to reading.
9 It is based on a southern English pronunciation and is therefore of no use with other accents.
10 There are not enough books and materials and they are inferior and too expensive.

A further group of objections are concerned with the problems it produced for children:

11 Children have difficulty in forming the characters.
12 ita in the classroom and TO outside causes conflict.
13 Children have more characters to learn.
14 The transition is difficult and much has to be unlearned.
15 Children will be confused if they move from an ita to a TO school or vice versa.
16 Spelling in TO is bound to be worse.
17 Parents cannot help with reading at home.

The final group of reasons are raised on behalf of the teacher:

18 Teachers need more and special training.
19 It forces the teacher to use phonic methods.
20 It makes more work for the teacher.

Probably the only one of these reasons with more than a grain of truth in it is the last one. ita encourages individualized instruction which inevitably means more work for the teacher, as does the enthusiasm for both reading and writing which ita seems to generate in children. The claim that ita demands a phonic approach deserves one comment. The statement is not true — ita's consistency also benefits the teacher using a whole-word or sentence approach. On the other hand, it is worth pausing for a moment to consider what kind of method or approach would be used to teach beginners to read if there existed a precise one to one relationship between the written and spoken forms of the English language — that is, for example, if the Shavian alphabet was ever adopted.

The main aim of this paper has been to raise the question of whether or not the irregularities and inconsistencies of written English are such that they inevitably cause confusion in the minds of a great many children learning to read — a confusion that could be removed by the use of an initial learning medium other than TO itself. Even if the definitive study to provide an answer to this question has not yet been carried out — and one may seriously doubt whether a definitive study in the social sciences is possible — it is claimed that there is more than enough evidence from comparative education and from a large number of research studies to demonstrate that the use of an initial learning medium is not only desirable but necessary in the early stages of learning to read English. And why not ita?

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9 A suggestion for a reading scheme based on Regularized Inglish

Axel Wijk

On a close examination it appears that no less than 90 to 95 per cent of the total vocabulary of English actually follow certain general rules or patterns, whereas only 5 to 10 per cent display distinctly irregular spellings. It is only among the commonest words that we find an exceptionally high percentage of irregular spellings, amounting to between 20 and 30 per cent. Quite obviously, it must be an extremely exacting task for little children of from five to six or seven years of age to learn to master the various rules of the complicated English spelling system, if at the same time they have to learn a large number of exceptions to the rules of the system. If we want to make it easier for our children to learn to read, the most rational and very likely also the simplest and most efficient way of achieving this is to change the irregular spellings into regular ones for the period during which children are learning to read and thus make it possible for them to concentrate on mastering the regular phonic units of the spelling system before attempting to learn the numerous exceptions to it. This is what has been done in *Regularized Inglish*, apart from certain minor modifications in the spelling system. By the aid of *Regularized Inglish*, ordinary English may be turned into a language with a *regular* spelling system which can be taught in accordance with definite rules of pronunciation.

With a regular spelling system it ought to be possible to teach English reading in much the same way as reading is taught in all other European languages, i.e. by means of systematic study of the rules of pronunciation for the various existing sound symbols. In order to teach reading in this way we need, in addition to a regular spelling system, a detailed reading scheme, in which it can be shown how the principles laid down should be applied in practice. With the assistance of English teachers of reading I have now managed to produce a first attempt at such a reading scheme comprising two parts, Book One for the introductory stage and Book Two for the more advanced stage. The scheme is not quite complete in every detail and can no doubt be improved in various respects but it is, I think, comprehensive enough to serve as a basis for discussion. An indication of the general plan of the reading scheme may be obtained from the brief survey of the phonic units to be taught in the two parts of which the scheme consists. In the teachers' manual, which accompanies the scheme, running

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comments are offered on the general plan for teaching reading by the aid of the new method.

Book One of the scheme is intended to lay the foundations of the art of reading by first teaching the commonest sounds of the letters of the alphabet i.e. the short sounds of the five simple vowel letters and the normal sounds of the twenty-one simple consonant letters. When these have been taught, we pass on to the various consonant digraphs, such as *ng*, *sh*, *ch* and *th*, and to the sounds of the combinations *ar* and *or* at the end of words and before consonants in stressed syllables. Towards the end of Book One we finally also deal with the vowel and consonant sounds that are found in the unstressed endings *-y*, *-ies*, *-ied*, *-er* and *-ed* and with the sound of the combination *er* at the end of words and before consonants in stressed syllables. All in all the introductory stage comprises forty-eight phonic units, the sounds of which are taught in just over eighty lessons by the help of pictures of concrete objects.

To begin with the sounds are only illustrated by short simple words consisting of three or four letters, but as we proceed in our course the words are joined together into short phrases and short simple sentences. Although the scheme may be said to be almost exclusively phonic, it has not been thought necessary to submit dogmatically to the limitations of this method and a few sight words have therefore been introduced now and again to make it easier to compose suitable practice material and to enable us to proceed more rapidly in the reading scheme. The only sight words that have been included in the first half of Book One are the indefinite and definite articles and the preposition and mark of the infinitive 'to'. In the latter part of Book One about two dozen sight words have been introduced, among them such words as 'her, he, she, no, theze, thoze, here, thare, whare, their' and a few nouns and verbs such as 'faather, caan't, queen, teeth, book, look' etc. Actually all of these words agree in their spellings with the general rules of the spelling system and should therefore only temporarily be looked upon as sight words. Generally speaking, the first part of the reading scheme does not present any serious problems as regards the introduction and illustration of the various phonic units.

When we come to the advanced stage of the phonic programme, which is dealt with in Book Two, things become somewhat more complicated. We should first note that the advanced stage adds eleven new vowel sounds to the nine of the first stage, but only one new consonant sound, the voiced equivalent of the *sh*- sound, as found for instance in 'vizion' and 'mezure'. We find, however, a very large number of additional spelling units, particularly with regard to the vowel sounds of stressed syllables. Thus for each of the long sounds of the five simple vowel letters we find at least three, four or five different spellings. The number of units is further considerably increased by the fact that the simple vowel letters as well as the numerous vowel digraphs generally display slightly varying pronunciations according to whether they are or are not followed by the letter *r*. We should also note that the vowel letter *u* stands for two regular sounds, as found in 'cube' and 'rule' respectively, and that the same or similar variations in the pronunciation are found for the digraphs *eu*, *ew*, *ue*, *ui*. If all the varying pronunciations are counted as separate phonic units, the advanced stage actually displays no less than seventy-two additional units, representing the vowel sounds of stressed syllables. Fortunately, however, a great many of them can be dealt with together to advantage, thus for example *ai* and *ay*, *oi* and *oy*, *au* and *aw*, *ou* and *ow* etc. In this way the number of new vowel units that belong to the advanced stage can be reduced to thirty-two groups, which makes it considerably easier to obtain a survey of the general structure of the English spelling system.

Besides the seventy-two phonic units representing the vowel sounds of stressed syllables, we further find seventeen more representing consonant sounds and a fairly large number of units representing the vowel sounds of unstressed syllables. It is the forty-eight phonic units of the introductory stage and the first-mentioned seventy-two plus seventeen, i.e. the eighty-nine phonic units of the second stage in particular, which it is essential to learn in order to acquire the ability to read. The vowel letters of unstressed syllables do not as a rule cause any great difficulty at the early reading stage and will therefore hardly require to be specially taught.

It should further be emphasized that at the stage which we are now at, it is important that the new reading material should, to a larger or smaller extent, be presented in the form of connected texts. As we proceed in our reading course, we will therefore strive to introduce various texts of this kind, for example nursery rhymes, children's songs, folk tales, short stories and other suitable texts.

Since it proves very difficult to produce even short connected texts without employing half a dozen or more phonic units that belong to the advanced stage, we are faced with the problem of devising a method which will enable children to read such texts. How then is this difficulty to be overcome?

There are two ways in which the problem can be dealt with. The difficulty will be reduced if we begin by first teaching the sounds of a few of the commonest units by the aid of pictures of concrete objects and by a number of disconnected sentences. In this way we can, for example, quite easily teach the sounds of the units *aa*, *ee*, *ea* and long and short *oo*. Once this general foundation has been laid, it is comparatively easy to add new phonic units and to illustrate their use by connected texts which only contain a few additional phonic units.

To facilitate the reading of these additional units the previously mentioned lists of words illustrating the various phonic units to be taught at the advanced stage of the reading scheme should be printed at the end of Book Two. Whenever words with additional units happen to occur in the texts, the children can be referred to these word lists for further examples of the unit or units in question or else the words can be taught temporarily as sight words.

With regard to the *Regularized Inglish* spelling system we should note

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that its greatest advantage is that it permits us to use a predominantly phonic and therefore logical approach to the teaching of reading, which should make it possible and very much easier for practically all children of normal ability to learn to read. It should further be pointed out that if *Regularized Inglish* were to be generally adopted for teaching reading, it would in all probability lead to a saving of a whole year's work for the majority of schoolchildren, if not for all of them. It would also contribute very largely towards abolition of the existing amount of illiteracy and backwardness in reading.

I am fully aware that English teachers must be extremely sceptical as to the possibility of discovering an approach to the reading problem which will enable children to learn to read more or less exclusively by the aid of phonic methods. That is why I have taken pains to try to demonstrate that it is entirely possible to teach English reading in the same way as reading is taught in all other European languages, if only the English speaking people are willing to use a transitional spelling system for the first two school years. Since the present teaching methods evidently leave a great many children in the lurch we ought, I think, to undertake an experiment to test whether English reading and writing cannot be taught more easily, rapidly and efficiently by the aid of *Regularized Inglish*.

Answers to objections

Many teachers will raise the objection that the use of *Regularized Inglish* would mean that instead of teaching children the correct spelling of words right away we should be teaching them lots of spellings which are wrong and which they would therefore have later to unlearn again, for example spellings such as the following:

eny, meny, sed, sez, woz, wont, whot, bred, hed, reddy, steddy, frend, etc.

instead of:

any, many, said, says, was, want, what, bread, head, ready, steady, friend, etc.

To this objection one might answer that by teaching children the correct spelling of such words right away, the teacher would indirectly tell them that the phonic rules that she is trying to teach them at the same time are extremely unreliable, and that one can therefore never feel quite sure how new words should be pronounced.

It might further be said that by teaching children lots of exceptions to the general phonic rules right from the start, one hides from them the fact that the vast majority of English words — 90 to 95 per cent of the total vocabulary — actually follow certain general rules of patterns, and that by doing so one gives them the entirely false impression that there are no reliable rules for the connection between spelling and pronunciation in their language.

One would like to question whether it can really be considered sound and justified from the pedagogical and psychological point of view to try to teach little children of from five to six or seven years of age both the general rules of the complicated English spelling system and the numerous exceptions to it at the same time. For my own part I am inclined to think that it must be far better to eliminate the irregular spellings in the language and replace them by regular ones for the period during which children are learning to read, and thus make it possible for them to concentrate on learning the regular phonic units of the spelling system before attempting to learn all the numerous exceptions to it.

A common objection to the use of a purely or mainly phonic approach in reading is that it is said to require a lot of boring mechanical drill to teach the relationships between letters and sounds from the beginning and that, with this approach, it will not be possible to compose reading material for the early reading stage that could be interesting for little children.

For these reasons many teachers think it is better to use the whole-word method to begin with, which permits us to compose simple texts right from the start with subjects that will be interesting to children.

To this objection we might answer in the first place that with a regularized spelling system it will be possible to teach the elementary facts about the language much more rapidly than before, and that it will therefore not be long before we shall be able to put together meaningful short phrases and sentences for the children to read. That is the procedure that is normally followed in languages with fairly phonetic spelling systems.

As for the charge of tediousness, I do not think that little children will find it boring to learn to read a lot of simple everyday words, such as cat–hat, man–pan, hen–pen, leg–egg, pig–twig, dog–frog, plum–drum etc, especially when they are accompanied by illustrations. To begin with one might very well use these words by themselves without putting them into short sentences.

The charge of tediousness is also one of the principal charges against both the pure whole-word method and the mixed whole-word and phonic approach. What can be more boring than having to learn many hundreds of words by heart by constant repetition without being told about the rules for the relationship between letters and sounds ?

A further objection that is sometimes made against the use of a spelling system which is more or less phonetic in character, is that the varying types of pronunciation that are used in different geographical regions or by different social classes, make it impossible to devise a reformed system of spelling which will make it easier for the speakers of all these different types of English to learn to read and write.

It is of course quite true that it is not possible to devise a system of orthography which will simultaneously render all the different types of pronunciation that are found in different parts of the country, or among different social classes, but since the present system of orthography does not attempt to do anything of the kind, there is no reason why we should demand that a regularized system of spelling should try to do such a thing. The only sensible and practical solution to this problem is to accept the fact that the written language must be based on the principal type of spoken British English — received pronunciation — which we find recorded in great detail in the various existing dictionaries. It is this type of pronunciation which forms the foundation for the system of orthography that we find in *Regularized Inglish* and also for the changes in spelling that have been suggested for this system of spelling.

Conclusion

The reading schemes that are now in use are generally based on the mixed whole-word and phonic approach, which means that they entail learning to recognize such a large number of regular and irregular words by heart that the burden of memorization becomes exceedingly heavy for a large proportion of the children. The difficulty of learning to read English is thus largely inherent in the reading schemes themselves, which in their turn are to a great extent due to the numerous irregularities of the spelling system.

What then of the future? Shall we be content to march on in the old tracks and stick more or less exclusively to mixed schemes? Or should we be bold enough to embark on an experiment with the methods that are used in other languages? It must be readily admitted that the existing reading schemes enable the majority of children to learn to read without too much difficulty, but it should also be realized that these methods make it exceedingly difficult for a large proportion of the children to learn to read and that they will always leave a residue of normal children who will find the difficulties of acquiring the ability to read beyond their powers. Since *Regularized Inglish* holds out the prospect of making it possible and much easier for all children of normal ability to learn to read and write, I think we owe it to our children to carry out experiments with this spelling system.

10 The future prospects for the reading scheme, and the contribution it can make to the teaching of reading

Sheila K. McCullagh

Dr Elizabeth Goodacre (1967) reported that in 1959 out of 100 schools in London, ninety-six used one or more basic reading schemes and 82 per cent of these used a single scheme. Clearly, in the schools fifteen years ago the reading scheme was an essential and central part of the teaching of reading. Many things have happened since then:

1. More experimental work in the teaching of reading has been carried out in the schools than ever before. The whole question of the teaching of reading has become a live issue, widely discussed.
2. In spite of the fact that there has been evidence of early success in reading by children using ita, and of positive results achieved by other methods, it has not been possible to make an overwhelming case for any one medium or method in itself. What has emerged is the paramount importance of the *teacher*, and the vital part played by her in the children's learning.
3. The movement in schools towards a structure which allows for individual variations in experience, in development, in interests and in learning has gathered force.
4. But with this, too, has come a growing realization of the importance of systematic teaching. One of the main problems facing teachers today is to combine the freedom and flexibility which has been achieved, with the systematic learning and practice necessary to acquire any skill, including the skill of reading.
5. The linguists have made a growing contribution to our understanding of what happens when a child learns to read. Two of their findings are especially important to this discussion. First, the very personal nature of the individual's own speech and speech patterns, so that today teachers should be concerned not only with the dialect spoken by the group to which a child belongs but also with what is sometimes called the child's 'idiolect', i.e. his own individual language, his personal speech patterns and vocabulary. Secondly, the fact that readability is not simply a matter of vocabulary burden, of the rate at which new words are introduced; nor is it a question only of presenting words which a child will be able to

> 'decode' by using his growing knowledge of phonics; it is concerned with the patterns of sentences, and the reader's expectation, based on his past experience, of the way in which the words he is reading are likely to be grouped together — of 'what follows what'. So that in certain circumstances, 'Come and jump. Come, come, come' may be more difficult to read than the natural response, 'I won't'.

It is on the basis of these findings that the future of reading schemes must be considered.

The freer the timetables and the structure of the school day, the more freedom the children have to move about and follow their interests, the more a basic framework is needed for the teacher to use in planning the experiences the children need, and the work they must do in learning to read.

Reading is a skill, or rather a bundle of related skills, and everything known about the learning of skills indicates the importance of planned, sequential practice in achieving success. Early success is vital if a child is to maintain his effort to learn. If the gradient of difficulty is too steep, particularly at the beginning, the learner eventually gives up, 'switches off', and decides that this is not for him. A barrier to the whole idea of books and reading is built up; to break down this barrier and help children to try again becomes the most difficult task of the remedial teacher. Only graded material can make the beginnings of reading not a series of steps, but a slope.

It seems clear that the reading scheme, in some form or other, still has an essential part to play. The vital question is, what *kind* of scheme or schemes are needed, in the light of all that is known about the teaching of reading? That question implies another fundamental one, 'What is reading? What does it involve?'

The *Shorter Oxford Dictionary* defines 'to read' as 'to consider, interpret, discern . . . to inspect or interpret in thought any signs which represent words or discourse'. The emphasis on interpretation and understanding is important. The linguists have drawn our attention to the fact that reading demands active participation from the reader who, from his past experience of language, anticipates as he begins a sentence its possible outcome. To read with understanding also demands a thoughtful, imaginative response, an active use of past experience. Such activity and effort in learning will only be called forth if the text is of real interest to the children. In *teaching* children to read, at least three groups of skills which the learner must acquire have to be considered:

1 skills in recognizing printed words and sentences as symbols of spoken language
2 skills in decoding words which are not immediately recognized
3 skills in interpreting and understanding what is read.

The problem for every reading scheme is to provide books and reading materials which are intrinsically interesting, but which at the same time are carefully graded, and concerned with word-recognition, with decoding and with related skills.

In considering how this may be done, it is useful to divide learning to read into three stages:

1 the introduction to reading
2 learning to read using graded books and materials
3 the period when the child moves from 'reading schemes' to 'ordinary' books.

The division is inevitably an arbitrary one: in practice, each stage merges with the one that follows, but it is useful to consider the stages separately.

The introduction to reading

In the first stage there is a case for not including published reading schemes at all. Instead, a plan may be followed by which a child's first experiences of reading grow out of all the things he is doing in and out of school.

An infant school today can be a fascinating place. There are many activities going on, and new experiences for the children to explore. The teacher, whose responsibility it is to plan the children's learning, is concerned with developing literacy as a whole, knowing that spoken language precedes both writing and reading and is essential for their development. In such an environment, the first words a child sees written down may be his own name on his painting, a card on the 'discovery table', a caption to a picture on the wall. The first book he reads is one written by the combined efforts of his teacher and himself.

Only in this way can an individual child's first reading materials be based on his own vocabulary and speech patterns, and linked with his peculiar individual experiences and interests. Published books cannot depict closely the environment of every child who reads them: the world of Janet and John, of Peter and Jane, is as foreign to many supposedly 'middle-class' children as it is to any other child. Working-class environments are equally diverse. A young child's environment is his home and street, and the adults who live there. Even children living next door to each other may have very different backgrounds. The only book which reflects the child's *own* world is the book he makes himself.

Learning to read, using graded books and materials

The activities of the first stage are continued and developed in the second stage but new skills are asked for: the child must now read something he does not already know, must use his own experience to enter an imaginary world created by someone else. The books are also written in someone else's language. No matter how closely the writer attempts to match children's speech, he cannot record the exact patterns of language for all the different

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children who will read the book, any more than he can reflect their physical environment. Even if the book is composed of sentences spoken or made by children, it is not written in the idiolect, possibly not even in the dialect of the particular child reading it.

At this stage, skills connected with word recognition and decoding have to be learnt. But the systematic presentation and practice needed for these skills cannot be included wholly, or even mainly, in the texts of the early readers, if those texts are to retain compelling interest for the children, and be written in sentences close to normal speech rather than in 'primerese'.

One solution to the problem of teaching skills in word-recognition and decoding which is becoming more and more accepted, is to use ancillary materials to teach and reinforce these skills, rather than books. There are a number of reasons for thinking that these will be included more and more in future reading schemes.

There is a growing recognition that the teacher's responsibility is to do more than provide an environment for learning. The ita experiments have shown, among other things, how much many teachers welcome the opportunity for specific, systematic teaching, but there are many indications that the tide is flowing back in this direction. The hope is that it will carry with it all that has been learnt about the importance of interest and activity and a stimulating environment in learning.

Many useful pieces of educational hardware have been developed over last ten or fifteen years. The use of tape recorders and cassettes has been extended. Film strips, video tapes, and all kinds of reading games have become available. In conjunction with the teacher, and used as part of her overall plan for teaching, these can provide more effective, interesting and stimulating ways of teaching phonics and practising skills of word recognition than the text of a book.

This means that the central core of reading schemes, the books, are able to concentrate on the third group of reading skills, which is the most important of all, and to which all other skills are directed i.e. skills in interpreting and understanding what is read. T.S. Eliot said that, 'in order to write, it is necessary to have something to write *about*'. In order to read it is also necessary to have something to read about. Skills of interpreting and understanding a text cannot be developed if there is very little in it to be understood.

The first 'readers' the child meets must be based on his experience, if he is to learn to read with understanding. First impressions go deep, and the attitudes formed in early years are very lasting. But it is important to remember that experience is not the same thing as the physical environment. There are experiences common to all children, sheer human experiences, which can be told in a story, and which children understand, even if the background shown in the illustrations is a strange one, or even if the characters are not externally children at all, but cats or giants. The unhappiness of the ugly duckling is much closer to the experience of many children than a picnic with smiling children who never do anything wrong. This is recognized in the stories read *to* children; it should also be recognized in the books given to children to read for themselves, even the first books of their reading scheme.

Furthermore, books cannot only reflect the reader's human experience, giving him the opportunity to identify it and think about it, but they can also help him to extend that experience through his imaginative response to the text. The basic reading scheme used may centre on a group of characters in a particular setting, naturalistic or imaginary, because of the need to control the number of new words used; but as soon as the children begin to develop effective skills in attacking new words, they need as wide a choice of books at their reading level as the teacher can provide. The special value claimed for books about a working-class environment is that children reading them may come across people with backgrounds approximating to their own. Clearly, a danger would arise if one group of children were designated 'working-class' and another group 'middle-class', and each group was given different books to read, for this could only have a divisive effect. But there is another value in books about children from varying backgrounds which is very important: if the books show children thinking, feeling and responding as human beings, then children growing up under all kinds of different circumstances can identify with the characters, and come to recognize their common humanity. At the same time, the reader experiences imaginatively what life is like for someone else. One of the rewards of reading is that we learn to look out on life through another person's eyes. It is important that some books should include not only children of varying social backgrounds, but also children of different races. Such books are only just beginning to come into reading schemes in this country and more are needed.

There is another important point here. If we want primers to which children can respond with imagination, thought and feeling, then the stories, no matter how simply they are written, must first of all have passed through the fire of the writer's imagination and experience. We need books about children of different groups, different races and different countries, written by people who belong to those groups and races, so that they may be authentic, written from the inside rather than the outside. Let us not neglect also the stories we already have of people of different races and backgrounds in all the folk tales and fairy tales from different countries which are already available to us. It has been the concentration of reading schemes in the last twenty years on the family, and in particular on a little boy and a little girl and their parents, which has deprived our children of stories in which heroes and heroines belong to different places and different races.

Stories with an imaginary or with a fairy-tale setting have the advantage that while they can be true in all essentials to human experience, they refer to no particular social group, and so may be read by children of any class and of any race, and they appeal to a wide age range. Furthermore, because the characters are not children, the stories can sometimes be concerned with the deeper feelings of childhood, the hates and loves and jealousies and longings which children experience and express in their play, but which it would be virtually impossible to depict in naturalistic stories told in the few words which can be allotted to the first primers. Fairy tales abound in such feelings, but in a setting which distances them from the children, and so makes it possible to experience them in safety. These are beginning to find their way back into reading programmes, as their value is once again recognized. They belong in the first stage, in stories read to children, and have a place in the second stage, when graded material is being used. They are still important in the third stage of learning to read.

But since the texts of the first readers must still be very simple, there remain problems to be solved if the text is to be geared to the child's gradually developing skills, but yet be sufficiently stimulating. The solution here is to set the early primers in a much richer context. This can sometimes be done by providing children with actual experience, for example a book about fire engines might be preceded by a visit to a fire station, but difficulties arise if this has to be done for many books. Too many visits are disrupting. Alternatively, the books may be based on the everyday activities of children in a classroom, so that the teacher, by organizing her own classroom, can re-create in some measure that of the books. The danger here is that the themes of the readers are too limited to maintain the children's interest.

These problems can be avoided if the context is created through the children's imaginative experience, rather than by immediate experience in the world about them. It may be done by reading a story to the children which is then retold in their primers in illustrations and very simple captions; or perhaps in telling a story of which the few words in the primers are a part. Or the background context might be provided through the children's play, when they either take the parts of the characters they meet in the stories, or use play materials to create a Lilliputian world in which the stories take place. It is not a very big step from the imaginary world created by children in their play to the imaginary world created by the words of a story.

The primers are then read in the wider context, from which they derive much of their meaning. They can be written in sentences with which the children are already familiar, either because those sentences are very close to their own speech, or because they have already heard them many times in listening to the stories read or told by their teachers, or because they have used them in their play, or for all these reasons. The vocabulary of the books has become part of the child's own vocabulary. Because of the wider context, even the very simple sentences and captions are interesting and carry a deeper meaning than they otherwise could.

The period when the child moves from reading schemes to ordinary books

This stage is one which has in the past been sometimes neglected. It is

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a time when children are able to read the last book of a reading scheme fluently, but find the books on the library shelves too difficult for them to read with understanding and enjoyment. If children are asked to read always at the upper limit of their ability, their attention may have to be so centred on decoding, and other techniques for reading new words, that they have little left to consider and respond to the content of the books. They will also tire quickly. They need a great many books which are well within their reading ability, but which give them a greater choice and wider range than the basic reading scheme has done: all kinds of stories, and factual books too.

Learning to read is something which should continue through the whole period of education, and in a sense throughout life. There are many reading skills children have yet to learn or to continue learning — to question ideas, to interpret characters, to look up facts to evaluate what they read, to allow for the writer's background and point of view in their interpretation of the text.

These skills can only be developed over the years, though a beginning can be made in teaching some of them even with the first books of a reading scheme. But one of the children's main needs in this third stage is to 'learn to read by reading', i.e. to practise and consolidate the skills they already have while acquiring new knowledge, extending their experience through imagination, and reading for sheer enjoyment. A range of books at a reading age of about eight or nine years, but of a wider interest level, is needed and at present there is something of a gap here in what is available. It is an important gap, which needs to be filled.

'Reading is more than seeing words clearly, more than pronouncing words correctly, more than recognizing the meaning of isolated words. Reading requires you to think, feel, imagine' (Strang 1967). The reading scheme of the future should set out to be one of the instruments which the teachers use to help children to learn to read with thought, feeling and imagination. It is an immensely important instrument for the whole of their education.

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11 *Link-up:* a new reading programme

Rene Boote

Introduction

In the present atmosphere of concern about reading and reading standards, new books on the subject and new reading schemes abound. The choice of material for a particular school is not made easier by this proliferation, and teachers may find themselves depending on the uncertain guidelines of controlled vocabulary, appropriate story background, attractive pictures and a convincing publisher's handout. No doubt the rationale for the author's approach will be described in the manual to the reading scheme, but the final decision on which scheme to choose is likely to be subjective, being based largely on the teacher's judgment and experience.

The concern of this paper is the types of rationale upon which reading schemes are based. In particular it reviews the research findings which inform *Link-Up*, a new reading programme written by Jessie Reid and Joan Low.

Approaches to reading

Teachers of reading are classified by Southgate and Roberts (1970) into two groups: those who regard reading as a skill to be taught, and those who are more concerned with how the skill may be learned. The former are subject-centred, the latter child-centred. Reading schemes similarly reflect their authors' preoccupation with either the nature of reading or the nature of children.

Thus Daniels and Diack (1954) maintain that, 'the first essential skill to be acquired in learning to read is the ability to distinguish between words which differ only in minute details'. McNally and Murray (1968) have a different, though still subject-centred approach, 'An early aim in developing reading skills must be to ensure that pupils learn to recognize the essential words as they occur, accurately and readily.'

In contrast, *Breakthrough to Literacy* (Mackay *et al* 1970) starts with the child and his language. Reading should, in Mackay's view, 'relate to the uses of language with which children are familiar, and make sense in terms of what they need language for'.

Whatever the initial aims of a reading scheme, children are eventually expected to be able to perform phonic analysis, to acquire a sight vocabulary, and to recognize reading as an extension of the spoken language. This may be achieved through carefully planned stages incorporated in the books, through supplementary work devised by the teacher, or fortuitously by prolonged exposure to print.

Reading readiness

For some children learning to read is a long and laborious process. Rich prereading experience, strong motivation and interest in the reading books are essential foundations for success. These elements are products of the child's personality, his home background, and the school environment. His readiness for reading is perhaps the most crucial factor in his overall reading progress. Yet because readiness exhibits itself in different ways, and is usually subjectively assessed by the teacher, it receives only cursory attention in many reading schemes. The assumption is that the child will be motivated to learn by the intrinsic interest of the books themselves, or by his own sense of progress once he has begun the scheme.

Not all children respond adequately to their first reading books. Some become discouraged. Others remain uninterested, rejecting both conventional middle-class stories and the more recently devised 'working-class' books. These are potential candidates for the remedial class. Many of them belong to a culture where books have no place and where spoken language is nonliterary because it depends heavily upon paralinguistic features which cannot be represented in print.

In his report to the Plowden Committee, Wiseman (1967) submitted evidence that family literacy is a significant factor in reading success. Children who make good progress in early reading tend to come from an environment rich in books and book-talk. It has perhaps been assumed by teachers that readiness for reading can be achieved only in this kind of environment. Consequently all children have been encouraged to develop a love of books and stories *before* they start reading. Goodacre (1967) finds that teachers regard a child's response to books as the single most important indication of readiness to read.

Clearly an atmosphere of literacy is desirable in the classroom, but it is unrealistic to imagine that in a few months the teacher of thirty-five lively working-class children can achieve for them what a middle-class mother does in five years with one child. The position would appear hopeless if a love of books is indeed a prerequisite for the acquisition and development of reading skills.

Link-Up

Research basis

In *Link-Up*, Reid and Low (1973) do not dispute the value of literature. They begin, however, by taking a fresh look at the book-deprived child. What alternative sources are present in his environment which might encourage him to become interested in reading, if only for utilitarian purposes? It is here that the authors have a distinctive contribution to make. Writing in one form or another is to be found almost everywhere. In the absence of private books public print can be used as an effective starting point. *Link-Up* is specifically designed to take advantage of these nonliterary sources.

The need for this approach was highlighted by Jessie Reid's research with five year olds. In 'Learning to think about reading' (1966) she points out that some of her subjects do not know whether their parents can read or even what reading involves. Books are associated with pictures and 'numbers'. Conversely the word 'stories' is actually applied to 'number stories' to be made with Cuisenaire rods. Reid concludes that, 'reading, prior to the experience, is a mysterious activity to which children come with the vaguest of expectancies'.

Further research indicates that the mysteries of reading extend beyond the initial stages. Reid (1972) finds that 'literary' sentence structures convey to some children precisely the opposite of what was intended by the author.

For example, in 'Mary's dress was neither new nor pretty', more than half the seven year old readers thought that Mary's dress *was* new and pretty. For this reason the sentence patterns in the early books of *Link-Up* are based upon the structures most commonly found in children's speech. The source of this information is the research of Strickland (1962) and Loban (1963) supplemented by Reid's own ongoing observations. Thus children use the form 'John said, "It's raining" ' in speech. The literary inversion ' "It's raining" said John' is therefore reserved until they have had an opportunity to learn the significance of quotation marks. It should be made clear, though, that complex sentence patterns are not eliminated; rather they are developed. There is a gradual build-up towards a more literary style.

Link-Up is a child-centred reading scheme 'with a difference'. It is different in that the authors rely not on commonsense beliefs about children, but on research findings. It is different in that the child at the centre is assumed to have only the minimum attributes necessary for learning to read — the ability to use spoken language to his own satisfaction and to be interested in his environment. No other aspects of readiness can be taken for granted. The child that *Link-Up* postulates may know little about books; but he nevertheless has considerable experience of the written word. In the street, in the shop window, on the television screen — there are few places where he can escape the bombardment of print. It is a more immediate source of experience, interest, and motivation for these children, who may find little to identify with in the usual fictitious family.

Conceptual learning

By relating reading to everyday experience, *Link-Up* seeks to remove the mystery associated with it. Another source of difficulty is the incidental learning about reading that children must acquire. This learning is classified under four headings: conceptual, perceptual, motor and linguistic. The authors maintain that some learning has hitherto been wrongly classified, for example, confusion over reversals could well be conceptual rather than a perceptual problem.

When a child understands the basic concepts he has been initiated into some of the mysteries of reading. The kinds of concepts he needs to have are:

1 what written language is, and what it is for
2 that some differences in letters do not matter (e.g. y y) but others do (e.g. h n)
3 that letters have no three-dimensional existence, and therefore rotations and reflections can alter their identity (e.g. d b p)
4 that the only correct sequence for scanning print is from left to right
5 that the configuration of letters in a word is part of their significance (e.g. 'now' and 'own').

Conceptual learning depends not so much on practice as on insight and the use of appropriate language. The teacher can foster the attainment of these concepts by discussion in connection with current reading activities, and by the use of correct terminology. The result should be that, instead of becoming confused and possibly hostile about what ritual he is supposed to be performing, the child understands what activity is required of him and recognizes it as a contribution towards his progress in reading.

In *Link-Up* the teacher is expected to be an active participant in the learning process, and conversation about the written word is an essential part of the programme. The meta-language with which to discuss reading may not be caught unless actively taught. The manual, therefore, is not an optional extra; it contains 'a set of explicit ideas about the way children can be helped to learn to read and write'.

Reading materials

The core of the scheme is a set of readers, graded for vocabulary, sentence structure, and size of type. Prereading material consists of two large conversation pictures, and a set of well-illustrated 'trailer' books. Supplementary material includes lotto cards, draw-and-write cards, supplementary reading books and Limpet cards (Limpet cards are similar to the sentence makers in *Breakthrough*).

Because it is intended to make literacy meaningful to the less-privileged child, *Link-Up* deliberately blurs indications of social class. A variety of backgrounds and characters is introduced, and much of the activity takes place in the neutral settings of school, street and shop. Most readers will find something to identify with in the situations portrayed.

At the same time provision is made for the acquisition of the basic skills. Thus the teacher who likes to make an early start with phonics will find adequate examples to hand. And, where consistent with the over-riding principle of using spoken language as a source of material, the vocabulary has been chosen with spelling patterns in mind.

Conclusion

In the final analysis the validity of the *Link-Up* programme as a practical expression of its authors' principles can be assessed only by using it in the classroom. All reading schemes start with basic premises, implicit or explicit, about the nature of reading, or children, or both. The more readily the teacher finds herself able to make the author's theories her own, and recognizes the projected pupils as her own, the greater the likelihood of success. In a word the teacher, like any other craftsman, must have confidence in his materials.

Perhaps the strength of *Link-Up* is that it does engender this confidence. By constant reference to research findings, analysis of the mystique of reading, and care over details of presentation, Reid and Low have provided new insights into the early stages of reading. Although the programme was planned with the urban child in mind, the basic philosophy is applicable in all infant schools.

No general forecasts can be made about the effectiveness of *Link-Up*, since the success of any scheme depends ultimately upon the quality of the teaching. But teachers who familiarize themselves with the *Link-Up* manual must surely gain a better understanding of some children's problems in learning to read, and of some possible solutions.

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12 An empirical study of the reading while listening method

Mary H. Neville and A. K. Pugh

Introduction

Reading while listening is not new. It was usual in Victorian schools for children to listen to their teacher's reading and then to imitate what they heard. Huey (1908) mentions this imitative method and cites the opinion of a fellow American educationist that 'some day the debris and obtrusive technique of reading methods may melt away into the simplicity of some such practice as this'.

In England, however, the method was already in disrepute, on the grounds that it reduced reading to a mere mechanical accomplishment. In 1852, one school inspector, the Reverend Moseley (cited Goldstrom 1972), reported that, despite their regular reading of the reading-lesson books, children and teachers alike remained ignorant of the subject-matter.

There were certainly dangers in a method which placed a premium upon memorization and oral production, even if the method was effective for preparing children to satisfy the inspectorate that they had, in fact, learned to read prescribed texts. In retrospect, it is clear that the inspectors were not necessarily making a valid criticism of either the method or the teachers. As Matthew Arnold was aware (Sutherland 1973) the problem lay in the narrowness of aim of reading teaching of the time; an aim which, paradoxically, was dictated by the means of evaluation which inspectors commonly chose to employ.

The time-honoured way of assessing the reading attainment of school children was to listen to them reading aloud from their lesson books (Davies 1973). In the early twentieth century came a growing emphasis on silent reading for comprehension (Shayer 1972) and this may account in part for the decline of reading while listening. Equally important, perhaps, was the move away from class teaching and towards individual and group activities. Individual work, using reading while listening in a clinical situation, has been found useful by Heckelman (1969) who since 1945 has used what he terms 'the neurological-impress method'. With this method child and teacher read aloud in unison. Hollingsworth (1970) used a language laboratory for group work with the impress method and the availability of tape recorders has made reading while listening feasible for schools which reject whole-class teaching.

During the past few years several companies have marketed recorded materials for training in listening skills, usually with the justification that listening skills and reading skills are related. Daly (1974) provides a useful review, and considers that it is by no means sure that training in one skill helps to develop the other. The present concern, however, is with the few materials intended to improve reading by enabling the child to simultaneously hear and read a text.

The best-known British materials are the tapes and texts for listening and reading produced by the BBC: some of these have also been marketed by Penguin Educational. The purpose of the materials and the rationale for the method are given elsewhere by the BBC producers who devised the series (Doolan, Griffiths and Kerry 1971, Doolan 1972, BBC 1971, 1972a, b and c). The aim was to broadcast good quality recordings of interesting stories so that children in primary and middle schools could listen while following in a plain text. It is important to note that the reading was to be done silently. This differentiates the method from the imitative and impress methods referred to so far.

Teachers were encouraged to record the broadcasts so that small groups of children could work together, listening to a story several times over. Vocabulary level was not controlled, for it was argued that a restricted vocabulary load can make a book so dull as to convey to children, 'the clear message that reading itself is not deeply worthwhile' (BBC 1972c).

It seems that the producers considered that they had found a means whereby reading fluency and interest could be developed, and that this relatively simple method could compensate for certain ill-effects of the approach to teaching reading which concentrates upon developing technique at the expense of building up interest and confidence. Evidence obtained for the School Broadcasting Council (BBC 1972c) shows that many school classes heard the broadcasts and suggests that the opinion of teachers and pupils was generally favourable. Unfortunately, detailed evaluation was based mainly on the records kept by only four teachers and no tests were used to obtain measures of the effect of the series.

Davies (1974) reviews the series favourably and a somewhat similar method, with different materials, was found useful by Chomsky (1974) with five remedial readers. It should be noted, however, that Chomsky used as many as twenty repetitions, that her aim was to develop fluency in *oral* reading and that she gave the children various exercises in word- and sentence-analysis based on the stories.

Another variation of the method has been used by the present writers in an attempt to improve the silent reading of seven foreign students (Neville and Pugh, in press). With these students, whose English proficiency was poor, it was felt that the original rate at which the text was recorded was too fast. Consequently, a means was employed to slow the rate artificially, without changing the pitch of the message. As the students progressed, the rate of the text was increased. Comprehension questions were also used. The method appeared to be helpful for this group of students.

Some teachers (BBC 1972, p. 14) felt that the pace of the BBC's stories was too great for the children and Clay (1972, p. 72) has suggested, with reference to initial reading, that speech may be too quick for the visual skill. The value of slowing rate has been examined by Neville (1974) with 118 middle-school children of normal ability. Half the subjects listened to tapes at three different rates, and the other half listened while simultaneously reading silently. It was found that variation in rate had no effect on the listening group's scores on comprehension questions, but that those who listened and read obtained higher scores where the pace was slower. Sticht *et al* (1974) investigated the effect of varying the rate of listening while reading with two groups of adults of quite different ability. It was found that the retention of a group of college students was fairly constant as rate was increased from 128 words per minute, to 228 words per minute and then to 338 words per minute. The retention of the group of 'minimally literate men' declined considerably with these increases in rate, however.

It seems possible, therefore, that slowing rate is of help to certain people for reading while listening. There are also grounds for thinking that listening while reading may be an aid to fluency for readers at a certain level of attainment or stage of development. The theoretical basis for this view is given more fully elsewhere (Neville and Pugh 1974 and in press) but briefly it depends upon accepting Goodman's (1968) model of three stages of reading development. These have been designated (by Pugh 1974), the oral, the aural and the silent stages. At the aural stage the child may benefit from having aural input provided by a tape, since this gives him experience of fluent reading by reducing the amount of mediation which he must provide.

Despite the favourable opinion and the theoretical justification, there is still a need for some precise evidence on the effects of the reading while listening approach and on the importance of rate of presentation. It was decided, therefore, to study the *Reading and Listening 1* series (BBC 1971) both in its original form and in a slowed version, when used as part of the reading work of below-average middle-school children. The research attempted to find answers to two main questions:

1 Does *Listening and Reading 1* help to improve reading ability as measured by a standarized cloze test? (This type of test was used for lack of adequate measures of reading fluency or, indeed, of agreement on what precisely is meant by fluency.)
2 Does slowing the rate of presentation make any difference to the measured effect of the use of the series?

It was borne in mind that using the method might introduce practical problems of a technical and organizational nature. Consequently, a third question was also asked:

3 Is the method feasible for use in school with groups of children?

In the event, two small studies were carried out in the first and second terms of 1973–74. For both of these the subjects were drawn from a group of seventy-one children, aged between 9:2 and 10:1, in the first year of middle school. Their reading ages, as determined by the Holborn Test administered by the school, were below their chronological ages. In October 1973, they were tested with the GAP Reading Test (McLeod and Unwin 1970).

The first study

Subjects

From the seventy-one subjects, four groups, each containing six boys and six girls, were constituted. There were no statistically significant differences in respect of mean or variance for reading ages for the four groups on the GAP test.

Two pairs of groups were formed. Subjects of the two groups in a pair had been matched by sex and reading age. One group was arbitrarily assigned training at normal rate and its pair acted as a control. One of the remaining groups was arbitrarily assigned training at slowed rate and, again, its pair acted as a control. Thus, there were normal experimental and normal control groups and slowed experimental and slowed control groups.

Materials

The BBC *Listening and Reading 1* series (BBC 1971) comprises seven booklets, each containing a complete story, which is accompanied by a recording made by a professional adult reader. Owing to difficulties in obtaining the BBC texts, booklets produced by Penguin Educational in 1973 were used: these are unlike the original BBC texts in that they contain illustrations. The notes sent to schools by the BBC suggest that the series is suitable for children aged six or seven but that it may be used with older remedial children. It was felt that the material should not be too difficult for below-average nine and ten year old readers.

Tape-recorded copies of the BBC broadcasts were available. From these, slowed copies were prepared using a lexicon Varispeech I machine. This discards or reduplicates very small sections of a tape so that the recorded message can be compressed (speeded) or expanded (slowed) without changing pitch.

For this experiment, the slowed tapes were expanded for playback at 133 per cent of the original production time. The material was then arranged in seven units, some comprising a whole story and some the first or second part of a story. The approximate duration of the recordings was between 6¾ and 8¾ minutes at the normal rate and ten and thirteen minutes at the slow rate.

Training

Both slowed and normal experimental groups received training at two weekly sessions over seven consecutive weeks. Sessions were held between

9.30 and 10.00 a.m. and the two groups were trained concurrently, using two Tandberg Group Trainers placed in quiet corners in corridors. The Group Trainer 2 is, essentially, a sophisticated portable listening laboratory for twelve children. The original reason for using it was to avoid disturbing other children working nearby.

An experienced teacher was assigned to each group and supervised the training sessions. These followed a similar pattern from week to week. At the first session in the week subjects were given a few moments to look through the books. The recording was then started and subjects followed the story while they listened to the recording. When it ended the teachers were free to use the remaining time for any activity related to the story. From observation, it appeared that teacher Y tended to ask questions about the book while teacher X allowed free follow-up activities.

The *same* story, or part of a story, was repeated at the second session each week. Teachers were free to use any remaining time as before. The next week a new story, or part of a story, was begun and played through at two sessions as described. A register of attendance for the groups was kept by each teacher.

During these sessions the control groups continued their usual remedial reading in small groups with their class teacher (the school was unstreamed). They used a variety of reading schemes and the Stott materials were also available. Reading was taught during two other periods each week. All groups had usual classroom work at these times but the experimental groups sometimes did workbook exercises related to the *Listening and Reading* material.

At the end of seven weeks, i.e. in December 1973, the whole group of seventy-one was retested with an alternative form of the GAP test.

The second study

Subjects

For the second study it was decided to group children more rigorously according to reading ability and to assign poorer readers to the slowed condition. Accordingly, scores from the second GAP testing were examined for the forty-one children remaining after the subjects from the two experimental groups (of the first study) had been excluded. From the forty-one children, two groups of eighteen children were chosen. In one group (the normal group) the reading ages at the second GAP testing ranged from 9:1 to 10:3. In the second group (the slowed group) the GAP reading ages ranged from 7:8 to 9:0. (The chronological ages of all subjects now ranged from 9:4 to 10:3.)

In each of the groups of eighteen, twelve subjects were arbitrarily assigned to an experimental group. The remaining six subjects then acted as controls. There were no statistical significant differences in respect of mean or variance for the experimental and control groups in either condition.

Training

The same method of training as in the first study was used and the same two teachers were involved. However teacher X who had worked with the slowed tapes in the first study now trained the normal group. Teacher Y now used the slowed tapes.

On the basis of their previous term's experience, the two teachers adopted rather different approaches to their use of the *Listening and Reading* sessions. Teacher X left the group alone during much of the session while she attended to other groups of children working nearby. Teacher Y used the laboratory more as a teacher aid. He stayed with the groups and followed the story in his own book as he, too, listened to the tape. He then had an intensive follow-up period, still using the laboratory; here subjects were asked to read orally, to examine the text in detail and to discuss various points of the story.

During the sessions the control subjects continued with their normal reading activities, as in the first study. As before, reading was also taught to all subjects by normal classroom activities during the two other periods in the week.

In March 1974, the original group of seventy-one below-average readers was tested with the GAP test for the third time. The form of the test used at the testing in October 1973 had to be used again. It was felt that the practice effect would not be great after an interval of five months. The results of the third GAP tests for the subjects in the experimental groups of the first study were noted so that any trends continuing or developing after the end of their training could be observed. Thus, the subjects of both studies had pre- and post-test GAP scores; the first study experimental group also had post-post-test results.

Results

GAP scores

Means and standard deviations for the GAP tests (using reading ages converted to months) for all groups in both investigations are given in Table 1. The reduction in numbers in some groups is due to absenteeism during training, or was necessary to maintain original matchings.

Table 1 Means and standard deviations for experimental and control groups (Studies I and II) for GAP reading tests

Group	*Condition*	*Pre-test*			*Post-test*			*Post-post-test*		
		$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N
1st study slowed	Experimental	103.82	7.72	11	109.36	11.85	11	110.00	10.29	11
	Control	103.18	6.37	11	110.00	9.26	11	—	—	—
1st study normal	Experimental	103.64	7.31	11	108.27	11.68	11	112.09	9.03	11
	Control	104.18	7.52	11	110.27	9.50	11	—	—	—
2nd study slowed	Experimental	100.09	5.54	11	105.64	6.74	11	—	—	—
	Control	101.83	7.68	6	106.17	9.09	6	—	—	—
2nd study normal	Experimental	117.27	4.69	11	122.27	10.63	11	—	—	—
	Control	118.50	4.97	6	122.33	8.82	6	—	—	—

Comparisons between experimental and control groups
F tests for independent samples showed no significant differences in respect of variance in reading age on the GAP post-tests between the experimental and control groups.

Experimental and control group post-test means for the four different conditions were compared using t tests for independent samples. There were no significant differences in means. The t test for correlated samples was also applied where appropriate, but revealed no significant differences.

Table 2 Comparisons within experimental and control groups

Pearson product moment correlation coefficients

Group	*Condition*	*Pretest: Post-test* r	*Pretest: Post-post-test* r
1st study slowed	Experimental	0.69	0.87
	Control	0.71	—
1st study normal	Experimental	0.66	0.66
	Control	0.61	—
2nd study slowed	Experimental	0.65	—
2nd study normal	Experimental	0.23	—

Note: for $p < 0.05$ coefficient of 0.42 is required
for $p < 0.01$ coefficient of 0.55 is required

The relationship between the reading ages achieved at the various testings were examined within the experimental and control groups (Table 2). The coefficients were positive and significant ($p < 0.01$), except for the normal group in the second study where no significant relationship between the pre- and post-test performance was found.

Means were compared for experimental and control groups, using t tests for correlated samples (Table 3).

Table 3 Comparisons of means, using t tests for correlated samples

Group	*Condition*	*Pretest: Post-test* t	*Pretest: Post-post-test* t
1st study	Experimental		
slowed	Control	2.14*	0.28
		3.90†	—
1st study	Experimental		
normal	Control	1.48	2.06*
		2.90*	—
2nd study	Experimental		
slowed	Control	3.52†	—
		2.09*	—
2nd study	Experimental		
normal	Control	1.57	—
		2.01*	—

Significance: * $p < 0.05$ † $p < 0.01$

The differences between variances for correlated samples within experimental and control groups are given in Table 4. The t test for correlated variances given by Ferguson (1971) was used in preference to the more usual F test.

Table 4 Comparison of variances, using t tests for correlated variances

Group	*Condition*	*Pretest: Post-test* t	*Pretest: Post-post-test* t
1st study	Experimental		
slowed	Control	2.74†	1.31
		2.45*	—
1st study	Experimental		
normal	Control	2.89‡	1.55
		1.33	—
2nd study	Experimental		
slowed		1.16	—
2nd study	Experimental		
normal		4.17§	—

Significance: (two-tailed tests) * $p < 0.05$ † $p < 0.02$ ‡ $p < 0.01$ § $p < 0.001$

Discussion

The results show that there were no significant differences between the post-test means of experimental and control groups, in either the first or the second study.

In the first study, the experimental condition, either slowed or normal, appears to lead to increased variance in scores on the post-tests. This does not, however, continue to the post-post-tests. The actual gain in mean scores between pre- and post-tests was, in fact, more clearly established for the control groups than for the experimental groups. (It was partly because of the uneven performance of children within these experimental groups that the procedure was modified so that in the second study only the poorest readers listened to the slowed tapes).

In the second study, the performance of the subjects assigned to the experimental slowed condition increased significantly between the pre- and post-tests. The improvement is steady for all slowed subjects, as the variances between pre- and post-tests in this group did not change significantly and the correlation between the pre- and post-tests is quite high.

In the experimental normal condition, there is no significant increase in scores between pre- and post-tests but a very great increase in variance of scores, this being reflected in the corresponding low correlation coefficient (Table 2).

The combination of quite intensive teaching and slowed tapes appeared to be successful with the weaker readers in the second study. Some of the better readers, who heard the tapes at the normal rate and who had less teaching, made large gains but others progressed little.

The effects of the rate of the tape may be obscured in the first study by the mixed reading-skills of the children in the two experimental groups. Both the slowed and the normal conditions led to large increases in reading age in some children, but the effect was uneven.

Listening while reading seemed to help some children a great deal and this occurred without much active teaching. When there was more intensive teacher activity it is possible that benefit was spread more evenly. Slowing the tape was probably also helpful for poor readers.

The reactions of the teachers to the material and training technique were very favourable. Both liked the listening laboratory for the freedom it gave them to attend to other children in the class as well as its versatility as a teaching device. They felt that the materials were well produced and that the content was excellent for the children, who appeared to enjoy them very much and never objected to hearing them a second time. In fact, they wished to hear them yet again.

Since these were poor readers it had been anticipated that some children would simply listen without 'reading' at all. From observations, this happened only rarely, the children turning the pages in unison and referring to the training material as 'the stories we are *reading*'. There was some overt vocalization but this seemed to decrease as the training progressed.

The laboratory appeared to be a source of pleasure and motivation to the children. Not only did they feel important through being chosen to work in the groups, but the teachers reported that one or two children felt rather like disc jockeys or other 'heroes' as they put on their headsets and were envied by their classmates.

The teachers' reactions to the slowed tapes varied. Teacher X felt from the beginning that they were quite acceptable. Teacher Y (who used them only in the second study) at first found the rate of the message unnaturally slow and irritating. However, in working with the slowest readers he came to feel that this rate of presentation helped the children considerably in following the text. The children themselves made no comment on the slowed tapes. They appeared to find the rate quite usual and acceptable.

The effects of using experimental materials and special equipment are bound to be strong. However, these are effects which can be used to motivate reading in many middle schools. The design of these studies has not permitted full evaluation of the claims made for the BBC *Listening and Reading* series. However, there are indications that listening while reading, especially if the rate of the aural message is slowed to accommodate poor reading skill, may serve to give children an enjoyable experience of reading fluently. This may give them confidence to read further for themselves, while at the same time helping them to learn to build up cumulative comprehension of a passage. It also provides practice in such skills as word-recognition and identification. The evidence given here suggests that the effect of a listening while reading programme is similar to that of a small group remedial programme of the same duration. Since reading while listening can be more economical of teacher time and effort, it is worthy of further exploration.

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13 A longitudinal study of the effects of two reading methods on leisure-time reading habits

Vincent Greaney and Michael Clarke

Whether or not one takes the position that mass literacy is leading to mass mediocrity, the question of leisure-time reading — in extent and in quality — is rightly regarded as an important educational question. How much time people spend reading, what they read, the uses to which they put reading and the value they place on reading — these are questions which carry serious implications for all concerned with the teaching of reading. For, in spite of the heavy investment in reading education, it does seem that even when we succeed in teaching the skills of reading, the status of adult reading is far from reassuring (Harris 1969).

Numerous studies of the reading interests and habits of adolescents have been carried out in Great Britain (Inglis 1969, Jenkinson 1940, Smith and Harrap 1957, Yarlott and Harpin 1970) and in the United States (Andrew and Easley 1959, Gallo 1968, Witty 1969). It is difficult to compare the results of these studies since reading tastes appear to change with time (Yarlott and Harpin 1971). The problem of comparison is further complicated by the fact that the studies vary in their methods of assessment and also in the age level and education of the participants. Despite these discrepancies, there seems to be general agreement that fiction is preferred to nonfiction (Andrew and Easley 1959, Jesson-Dibley 1960, Shores 1964) and that poetry is not popular (Yarlott and Harpin 1971). Research on adult reading patterns seems to suggest that in the United States, at any rate, most adults regularly read newspapers, about 85 per cent read magazines and approximately one quarter read books (Asheim 1956). Research has also helped to identify a number of correlates of leisure-time reading. Among these factors are education and occupation (Asheim 1956), availability of material (Waples 1932), sex (Waples and Tyler 1931) and peer opinion (Smith 1956). There is however a dearth of research on the effects of methods of teaching reading on subsequent leisure-time reading habits of adolescents and adults. This lack of information is a serious limitation of reading research. The present study reports the results of a longitudinal study of the effects of two different approaches to reading used in primary school on subsequent leisure-time reading behaviour.

Background

Sample

In September 1967, all the pupils in two sixth standards in a Dublin boys' primary school were randomly assigned to either an experimental group (N:36) which used an individualized approach to reading, or to a control group (N:38) which used the traditional basal-reader approach. At the outset there was no significant difference between the groups in verbal reasoning ability or in age.

Reading methods

Both groups used the same classroom library and were taught reading by the same teacher during the daily forty-minute reading period. The experiment (Greaney 1969) lasted for eight months.

Each boy in the experimental group was allowed to select his own reading material which he read at his own rate during the reading period. At least once a fortnight each child discussed his progress and the material he had been reading with the teacher. These reading conferences were used for diagnostic and instructional purposes. Groups were organized to discuss common interests or to tackle common reading problems. Finally, each boy was encouraged to do some activity based on what he had read. All the boys in the control group used the same reader which had been officially sanctioned by the Irish Department of Education as being suitable for pupils in the sixth grade. While the boys in this group were free at any stage to use the classroom library, they were not free to read their library books during the class period. In an effort to compensate for any possible Hawthorne effect in the experimental group, the control group prepared and published a fortnightly school newspaper.

Primary school results

Measures of reading comprehension, spelling, word recognition, attitudes to reading, and of amount and quality of reading were obtained before and after the experimental period. There was no significant difference between the groups in reading comprehension, spelling and word recognition (Greaney 1969). However, significant differences in favour of the experimental group were found in the book-reading practices of the group. The experimental group read more books and devoted more time to book-reading. Furthermore, the fiction they read was rated of a higher quality than that read by the control group, and the range of topics in their non-fiction reading was wider. The attitude of the experimental group towards the reading class was more favourable than that of the control group (Greaney 1970).

In June 1974, questionnaires were mailed to the home addresses of the seventy-four students who had participated in the original study. At this stage the average age of the former students was 18.6 years. Completed questionnaires were returned for sixty-six subjects. Four subjects who received questionnaires failed to return them; four others could not be contacted. Of the respondents, thirty-five had been in the original control group and thirty-one in the experimental group.

Proportion reading books
The proportion of the group reading books was obtained by counting the number of respondents who had fully or partially read at least one book over the previous three months. In a similar manner, proportions were calculated for magazine reading over a two week period and for newspaper reading over a three day period.

Time devoted to books
Respondents were asked to indicate the amount of time they had devoted to leisure-time book reading during the previous two weeks. The response categories were A none, B less than one hour, C one to three hours, D four to six hours, E more than six hours.

Time devoted to magazines
Respondents listed the magazines they had looked at or read during the previous two weeks. After the name of each magazine they were requested to insert the number of minutes they had spent reading or looking at it.

Time devoted to newspapers
i.e. the number of minutes spent reading newspapers over a three-day period. The response categories were A none, B less than five minutes, C five to thirty minutes, D thirty-one to fifty-nine minutes, E one to two hours, F more than two hours.

Amount of book reading
i.e. the number of books fully or partially read as leisure-time reading over the previous three months. Books were divided into fiction and nonfiction categories and the number read in each of these categories was calculated.

Quality of fiction material read
Respondents were instructed to list the titles and authors of books they had fully or partly read for leisure during the previous three months. The listed books were classified by one of the writers, a former lecturer in English at a Dublin teacher-training college. A rating of five points was given to a category which was described as 'great books, including the classics'. Representative of this category were works by Brecht, Brontë, Camus, Chekov, Dickens, Dostoevsky, George Elliot and Kafka. The second category, given a four-point rating, consisted of other works frequently found on college literature courses. Representative authors in this category were Scott Fitzgerald, Salinger, Steinbeck, James Stephens and Wilde. Three points were allotted to 'good' quality fiction which was essentially entertaining, e.g. novels by John Fowles, Hammond Innes,

Neville Shute, Irving Wallace and Maurice West. Popular novels including crime, science fiction, and spy stories by writers such as Arthur C. Clarke, Maclean, Wheatley and Wyndham received a two-point rating. The lowest category, for which one point was allotted, consisted of material of the popular-ephemeral variety.

A mean quality score of the fiction material fully or partly read was calculated for each individual.

Quality of nonfiction material read

A four-point classification system was used in estimating the mean quality score of all the nonfiction material fully or partly read for leisure during the previous three months. Scholarly works most of which were of a philosophical, psychological, sociological, historical or political nature were given a four-point rating. Among those listed was *The Phenomenon of Man* (De Chardin), *Origin of Species* (Darwin), *Ireland since the Famine* (Lyons), and *The Gulag Archipelago* (Solzhenitsyn). Three points were allotted to popular or journalistic treatments of serious topics and to some biographical material. Representative of this category were *The Orange and the Green* (King), *Daybreak* (Baez), *Slaves of the Sons of Heaven* (Whitcross), and *Bury me in my Boots* (Trench). Two points were given to books dealing with crafts, hobbies and sports. Biographical material with popular appeal such as *Diary of a Rock Star* (Hunter) and *Sting like a Bee: The Muhammad Ali Story* (Torres) received a one-point rating.

Quality of magazines read

A four-point classification system was also used to classify magazines. A rating of four points was assigned to good quality magazines of a political, satirical, historical or professional nature (*Newsweek*, *Punch*, *Business Management* etc); three points to magazines dealing with hobbies and crafts; two points to sports magazines, some music publications (*Melody Maker*, *Disc* etc) and also a number of popular women's magazines (*Woman's Way*, *Woman* etc) and one point to material which was predominantly of the sensational popular romantic variety.

Leisure-time reading preferences

The questionnaire contained a list of popular leisure time activities, one of which was reading. Each subject was asked to mark the activities in order of amount of time devoted to each. Provision was made for ranking activities which were not printed in the questionnaire. Points were awarded for each rank. These ranged from one point for the first rank to eleven points for the activity that was given least time.

Results

Proportion reading books

Responses to the questionnaires indicated that over a three-month period 73.3 per cent of the experimental group and 57.1 per cent of the control group had fully or partially read at least one book. The difference between these two proportions was significant (z: 1.97; $p<0.05$). A further analysis of these data revealed that 66.7 per cent of the experimental group and 25.7 per cent of the control group had read at least one nonfiction book over this period. Again the difference between the two proportions was significant (z: 3.36; $p<0.01$). Although the percentage (63.3 per cent) of the experimental group respondents who had read at least one fiction book was greater than the percentage (54.3 per cent) of the control group, the difference between the groups was not significant (z: 0.74; $p>0.05$). The figures for magazine reading and newspaper reading were almost identical for both groups. Approximately two-thirds of the respondents had looked at or read at least one magazine during the previous two weeks and all but one respondent had looked at a paper during the previous three days.

Time devoted to books

The data based on the responses to [illegible] question, 'During the past two weeks how much time did you spend on leisure-time reading of books?' are summarized in Table 1. The value of chi-square (χ^2:5.55; df:4; $p>0.05$) indicated that there was no significant relationship between the type of reading instruction received at primary school and the amount of time devoted to leisure-time book reading.

Table 1 Leisure-time reading of books over a two-week period

Time	*None*	*Less than 1 hour*	*1–3 hours*	*4–6 hours*	*More than 6 hours*	
Group E (Experimental)	7	5	4	6	7	29
Group C (Control)	16	5	6	2	5	34

Time devoted to magazines

Over a period of two weeks the mean number of minutes devoted to magazine reading by group E ($\bar{X}$: 67.8; SD: 82.2) was less than that of group C ($\bar{X}$: 81.5; SD: 155.9). However the difference between the two groups was not statistically significant (t: 0.45; df:63; $p>0.05$).

Time devoted to newspapers

Approximately three-quarters of the respondents had spent more than one half-hour reading newspapers over a three-day period. The application of the chi-square test indicated that there was no significant relationship between type of reading instruction and amount of time spent reading newspapers (χ^2: 7.92; df 5; $p>0.05$).

Amount of book reading

While the mean number of books fully or partly read for leisure purposes over a three-month period was greater for group E ($\bar{X}$: 2.97; SD: 2.59) than for group C ($\bar{X}$: 1.91; SD: 2.28), the difference was not significant (t: 1.74; df 63; $p>0.05$). There was a significant difference between the mean number of nonfiction books read by group E ($\bar{X}$: 1.10; SD: 1.10) and by group C ($\bar{X}$: 0.45; SD: 0.95) (t: 2.54; df:63; $p<0.05$). For fiction, the difference between the groups (group E: $\bar{X}$: 1.87; SD: 1.96; group C: $\bar{X}$: 1.46; SD: 1.77) was not significant (t: 0.88; df: 63; $p>0.05$).

Quality of fiction material read

The mean qualitative ratings of fiction books read or partly read was 2.54 for group E; for group C the mean was 2.44. There was no significant relationship between methods of reading instruction and quality of fiction material read (χ^2: 1.83; df: 4; $p>0.05$).

Quality of nonfiction material read

Because of the small number of entries in the two lowest categories (i.e. books dealing with crafts, hobbies and sports, and biographical material with popular appeal), these categories were merged. A chi-square analysis of the data showed that there was no significant relationship between type of reading instruction and quality of nonfiction material (χ^2: 1.70; df: 2; $p>0.05$). The relatively high mean ratings recorded by group E ($\bar{X}$: 3.10) and group C ($\bar{X}$: 3.33) indicate that in general the nonfiction material was of a high standard. Good quality books of a philosophical, psychological, sociological, historical or political nature accounted for 46.2 per cent (E: 47.1 per cent; C 44.4 per cent) of the nonfiction material read. Popular treatments of serious topics proved to be the second most popular category (30.8 per cent) among the respondents in both groups (E: 23.5 per cent; C: 44.4 per cent).

Quality of magazines read

The mean quality rating for group E ($\bar{X}$: 2.66) was slightly greater than that for group C ($\bar{X}$: 2.38). However, the relationship between the quality of magazines read or looked at and type of reading instruction was not significant (χ^2: 3.12; df: 3; $p>0.05$).

Leisure-time reading preferences

Reading was the fifth choice of group E and the sixth choice of group C. The application of the Mann-Whitney U test to the ranked data indicated that leisure-time reading could be considered equally popular among both groups (z: 1.53; $p>0.05$).

Discussion

In interpreting the results of this study it is important to bear in mind that the sample which was used was quite small and was confined to students from one Dublin school. Therefore the reading patterns observed should not be considered representative of eighteen to nineteen year old Irish males. Secondly, a number of questions on the questionnaire covered a period of time during which approximately one fifth of the subjects were either preparing for or taking examinations. Had the survey been conducted at a later date it is likely that the mean score on a number of variables for both groups would have increased. Thirdly, no attempt was made to validate the respondents' claim concerning their reading habits. It should be noted however that their responses to a number of open-ended questions were quite frank; no apparent effort seems to have been made to give the socially desirable answer. Lastly, the term 'read' was used rather loosely to describe books which were fully or partly read and also magazines and papers which were looked at.

Despite these limitations the findings are of some importance. They indicate that an approach to reading in which efforts are made to develop favourable attitudes toward reading may have more positive long-term effects than the more traditional basal-reader approach. The present study was carried out six years after two groups of students had been exposed to two different approaches to reading. In comparison with former basal-reader students, a significantly greater proportion of subjects who had been exposed to an individualized approach had read at least one book during a three-month period. Members of the individualized group had read significantly more nonfiction books than their basal-reader colleagues. Furthermore the proportion of the individualized group who had read at least one nonfiction book was also significantly greater. More specifically two-thirds of the individualized group had read at least one nonfiction book during a three-month period as against a quarter of the basal-reader group.

While it is obvious that firm conclusions cannot be reached on the basis of this exploratory study, nevertheless a number of findings are pertinent to reading instruction. The evidence from this study shows that effects of a particular method of reading instruction may persist over a number of years and that an approach to reading in which efforts are made to foster the book reading habit, such as an individualized approach, can have positive long-term effects.

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14 Planning for reading progress in informal primary schools

Vera Southgate

'Informal' schools

Some twenty-five years ago reactions against formal teaching situations resulted in the establishment of a few 'progressive' or 'informal' infant schools as they have since been called. The movement increased throughout the 1960s and gained greater momentum during the 1970s. The ideas and practices have spread to the USA where the term 'open classroom' is generally used. Although none of the three terms is entirely satisfactory, the writer prefers the description of 'informal'. They are umbrella terms embracing various combinations of certain beliefs, aims and practices. The beliefs include the following:

1 effective learning rarely takes place without motivation on the part of the learner
2 learning is a process requiring activity on the part of the learner
3 children differ from each other not only in abilities and interests but also in their preferred modes of working and their learning patterns
4 the role of the teacher should be that of a guide and counsellor rather than that of an instructor.

These beliefs are crystallized in certain aims, such as:

1 the provision of a stimulating environment
2 freedom for children to explore this environment in their own ways
3 the encouragement of social relationships and all forms of communication.

Beliefs and aims like these have led to the adoption of practices such as vertical grouping, an integrated day, open planning and team teaching. In vertical grouping each class or unit consists of children of different ages and all levels of ability. Open planning refers to both the building and the uses made of it by children and teachers. Many of the newer schools are purpose-built with large common areas and flexible partitions to enclose smaller areas as necessary. In older buildings the working areas overflow from classrooms into corridors, entrance halls, cloakrooms, dining rooms and playgrounds. Open planning leads quite naturally to a weakening of the concept of one teacher to one class. 'Classes', if they exist as such, mingle and regroup as occasions demand. Teachers cooperate on large projects. Sometimes one teacher works with a large group of children while others help individual children or small groups. Thus team teaching comes into effect. Various combinations of the four factors mentioned exist in different schools which may all be termed informal.

Two ways of differentiating between formal and informal schools are commonly put forward. It can be said that in formal schools the emphasis is on *teaching* while in informal schools it is on *learning*. The former can also be regarded as *curriculum-centred* and the latter as *child-centred*. The writer suggests that the differences may be regarded in terms of existing barriers and their removal — barriers relating to subjects, time, space and people. In informal schools, as barriers between subjects are removed, all knowledge is regarded as a whole; one line of discovery can spring from or lead to any other. The time barriers are broken by the removal of timetables, bells and playtime intervals which are found to be unnecessary. With regard to space, as barriers of walls are removed or ignored, children work not only in all areas of the school but also frequently beyond the bounds of the school in both urban and rural environments. Barriers between people, for instance between teachers and children, children and children, teachers and teachers, teachers and parents, the school population and the community surrounding the school, are inevitably decreased as social relationships increase. Schools at the extremely informal end of the continuum have removed the majority of these barriers, while some schools at the formal end have barely begun to do so. In between can be found a variety of practices. But the breaking down of barriers constitutes a destructive and sometimes even dangerous act, as instanced at certain football matches. The removal of barriers to learning could well create an environment in which freedom for children to learn when, what and how they choose, becomes freedom to refrain from learning those skills, such as reading and writing, which a literate society must necessarily consider to be one of the main aims of compulsory education. At the same time, the demolition of barriers can easily lead to behaviour which is purposeless and distracting, even if not dangerous, unless teachers replace the abandoned procedures by clearly defined new procedures.

It should not be forgotten that in the formal schools a large proportion of children *did* learn to read and write. New forms of organization should therefore be critically examined to ascertain whether they not only encourage creativity, sociability and so on but *also* produce more and better readers than did the discarded formal regimes. Whilst strongly supporting the movement towards child-centred education the writer has, for some time, been seriously concerned lest the growing movement towards informal regimes should result in a lowering of reading standards. In 1968 (Southgate 1969) at the Second World Reading Congress in Denmark the writer was saying '. . . the prime danger when the emphasis is on learning is the possibility that the teacher will assume that, given a stimulating environment, all children will, in time, want to learn to read and be able to do so without specific instruction'. In 1969 (Southgate 1970) at the Sixth Annual Conference of the UKRA at Nottingham, the writer was indicating that, '. . . the freer the atmosphere and the more informal the working procedures, the more imperative it becomes that the reading environment should be so structured as not only to encourage reading but also to forward its progress'. At that time, some 'progressive' infant teachers certainly considered that a retrograde step in education was being advocated.

It was thus all the more encouraging to find Cane and Smithers (1971), after studying data from twelve infant schools in deprived areas in London, reporting that '. . . initial reading success does not prove to be associated with what are sometimes loosely considered to be "progressive" methods . . .'. They concluded that the major difference between schools successful and unsuccessful in teaching reading was, 'the lack of systematic instruction in the unsuccessful schools', in which they noted a considerable neglect of phonics, few set periods of reading instruction and a delay in beginning to teach reading until children manifested spontaneous interest in it. In contrast, in the successful schools, reading instruction tended to be organized and recognized from the start and early phonic instruction was common. The one exception to this general trend was the most successful school of all, in which activity methods and creativity were combined with a certain amount of teacher-direction. The writer *would like to see this exception become the rule*. It will only do so when the problem of finding the most effective balance between teacher-directed instruction and child-centred learning has been solved.

The advantages and disadvantages of informal schools

Advantages

In terms of mastery of language skills, the following are some of the advantages observed in the most successful of British informal schools.

As children move about and engage in various purposeful activities they are frequently engaged in meaningful discussions with adults and other children about objects, ideas and problems which interest them. Through this increase in communication the skills of speaking and listening are continually being extended and reinforced. Language enrichment, which will form a firm basis for reading and writing, is a natural outcome of such situations.

Spoken communication is quickly followed by the desire to communicate in writing. The child may ask his teacher to write a few words under a picture he has painted or a model he has made. (Incidentally, as these words are meaningful to him he can read them, which often proves a better introduction to reading than the first books of basic reading schemes.) One of the most noteworthy features of many informal primary schools has been the increase in children's free written work, including original stories and poems as well as factual reports.

The profusion of freely available books soon makes most young children realize the pleasures which adults and older children obtain from books. The motivation to learn to read is thus strong.

Motivation increases as functional reasons for wanting to read are soon added to the recreational reasons. The child is curious about the exhibits and pictures surrounding him. He is led unobtrusively into reading by his desire to understand the notices attached to interesting objects. He wants to know that the new creature in the aquarium is called a stickleback. He notices that older children can find further information about sticklebacks from reference books and he wants to do the same. He is also tempted by notices such as 'Two children may play at the sand tray', 'How tall are you?', 'Write your name here if you want to weigh'.

In schools in which books form an important and much-used part of the environment children can, at a very early age, acquire the habit of becoming absorbed in them for lengthy periods. Many read extensively for sheer pleasure and they use books to find the information they require almost as naturally as, in the teacher-directed school, they turn to the teacher.

As reading and writing are spontaneous child-directed activities, there is more likelihood of children continuing to use these skills outside school and when they leave school.

It should be noted that the foregoing advantages refer to *successful* informal schools. Schools which have demolished the former barriers to learning and failed to substitute appropriate supporting frameworks can lay claim to few of these advantages.

Disadvantages

Although children may find learning to read and write to be more enjoyable in informal than in formal schools, their teachers, especially the least experienced of them, are likely to encounter a number of problems. The following list includes the most frequently noted dangers and disadvantages.

'It is easy to assume that because the absence of motivation is a serious handicap to learning, its presence precludes the need for some teaching' (Southgate 1972). It is unwise for teachers to assume that in a stimulating environment all children will want to learn to read and will be able to do so without direct teaching. There is a danger that the child who does not evince a desire to read — and such children do exist in informal schools — will be left to drift for too long.

The teacher, in order to structure effective learning situations in which individual children or small groups will inevitably take the next step forward, needs to have a detailed knowledge of the many elements which make up the total skill of reading and the ways in which these skills might be learned and used. Yet the training of British teachers has rarely equipped them with this breadth of expertise.

The teacher's task is more complicated in the informal than the formal school. Her apparently unobtrusive role disguises the fact that behind the scenes there should be a highly structured master plan of what needs to be learned, the ways in which the parts may be mastered, and detailed arrangements for the use of different kinds of reading materials.

While some teachers realize that the more informal the school regime the more necessary does some form of assessment and recording of children's progress become, other teachers have done little about this.

The variety of ongoing activities and the constant movement and conversation of children in informal schools may disguise the fact that those children who most need encouragement and opportunities for quiet concentrated reading practice — that is the poorer, slower readers and the easily distracted children — are least likely to be engaged in it.

It is known that even in formal schools in which each subject has its allotted span of time, most schools do well in certain subjects and less well in others, depending on where the priorities and current interests of the staff lie. This fact highlights two dangers regarding reading in informal schools:

1 Areas of the curriculum such as creativity, mathematics or science may be given top priority, whilst reading tuition sinks down the list.
2 When timetabling existed even the least popular subjects were likely to be taught fairly regularly, but in the progressive school, if reading tuition is not given high priority, it can dwindle into almost nonexistence.

Environmental studies and topic work can only be successfully undertaken if children have access to a wide range of books at different levels and if some guidance is given on the selection and use of appropriate books.

An emphasis on free expression in written work can cause teachers to overlook the need, as children become older, for increasing attention to be paid to the improvement of such techniques as spelling, punctuation, grammatical structure, range of expression and clarity of style. Insufficient thought has been given to ways in which the latter might be achieved without inhibiting the former.

Planning for progress

If teachers can capitalize on the advantages of informal schools and avoid the pitfalls, as far as reading and writing are concerned, progress in the two subjects will take a great surge forward. Only a few suggestions can be given in one paper but these may alert teachers to the kind of problems they need to be trying to solve.

Staff discussions

Arrange to hold regular staff meetings, outside school hours, to discuss overall planning for reading progress. Check that all the staff have the same aims and are moving in the same general direction. Bring forward the knotty problems and work out joint solutions. Such meetings, almost

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regardless of the decisions reached, will ensure that reading is given a high order of priority in the school curriculum. A 'reading drive' (Southgate 1965) will come into effect, which will almost certainly result in reading improvement.

The task

At the first meeting, the total task of learning to read, the skills to be mastered, the uses to be made of them, the attitudes and habits to be acquired if children are to become effective adult readers, might be discussed. British authors of books about reading, in contrast to American writers (e.g. Harris 1970) rarely attempt to describe and analyse the act of reading. Yet successful teaching and learning is unlikely to occur unless teachers are able to define the content of the total subject matter. Infant teachers need this sort of framework just as much as do teachers of older pupils, because so many of the more advanced skills need firm foundations laying in the infant school.

Next, consider one aspect of the task in detail; preferably an area which needs to be developed consecutively over a number of years. Training for dictionary and reference skills, for example, may start with the infants' card-index form of picture dictionary and extend to the use of large encyclopedia in the secondary school. The goal should be an agreed plan for the continuing development and use of the selected skill throughout successive classes in a school. Plans for other areas of reading development can be made at subsequent meetings.

Assessment and record keeping

In any school it is essential that teachers should not only be knowledgeable about the total task to be mastered, but should be aware of the child's progress in the various areas of the whole. Without some form of assessment and record keeping, a teacher is unlikely to provide the child with appropriate work. If this is true in the formal school, it becomes even more necessary in the informal school, where children are engaged in different tasks at different times. No teacher can introduce specific teaching at the appropriate moment, arrange for the skills taught to be reinforced and practised by a particular child, and ensure that he is helped through his difficulties and on to the next stage, without some form of record of the child's progress and the areas of weakness.

Primary school teachers in Britain have traditionally tended to rely more on intuition than on detailed assessment and record keeping. Diagnostic reading assessments, for instance, are not in common use although Schonell's diagnostic tests were published in 1950 and Daniel and Diack's in 1958. Since then a number of other useful publications have appeared, for example, Cotterell (1973), Goodacre (1972) and Dean and Nichols (1974). Three recent books on record keeping by Dean (1972), Foster (1971) and Rance (1972) would also be found helpful. In addition, teachers discussing assessment and record keeping should certainly be able to list numerous ideas of their own of games and activities whereby both they and their pupils can help to check and record progress.

Optimum use of books

The writer has long thought that reading schemes played a less important role in children's reading progress than was commonly supposed. 'The words found in the early stages of a basic reading scheme may represent only a small proportion of the actual printed and written vocabulary with which the child is in contact during his time in school' (Southgate 1969). A small experiment (Southgate and Lewis 1973) lent support to this suggestion. It was found that in six infant schools, in which the teachers believed their reading teaching to be centred on a basic reading scheme, only 12 per cent of the total time spent on reading and writing activities was in any way related to the chosen scheme. The remaining 88 per cent of the time consisted of activities related to other books and reading materials. This evidence suggests that all the supplementary reading materials in use in primary schools may play a decisive role in the children's planned or unplanned reading programmes — far too important a role to permit them to be used haphazardly and ineffectually as sometimes happens.

Although the majority of primary schools possess large stocks of books, many children *read*, as opposed to *glancing at*, only a small proportion of the books. Why is this? Three reasons are suggested.

1. Most children actually read fewer books than they are capable of reading, at each stage of development, because many of the books they are given to read, as well as those they choose for themselves, are far too difficult for them.
2. Too many books remain in stock cupboards or teachers' cupboards for too large a proportion of the year, which is a great waste of reading resources.
3. Alternatively, or in addition, too many books are spread around on open display for too long.

The many attractive book displays found in informal schools are meant to motivate children to read. This initial motivation is frequently achieved but it would be more likely to grow into continuing motivation if two dangers were avoided — static book displays and insufficient guidance. If the books on display are not changed at fairly frequent intervals, they can become like permanent pictures on the wall, which children hardly notice. Most book displays consist of books at different levels of difficulty but, 'Complete freedom for the child to try to read materials which the teacher knows to be too difficult for him is merely providing him with a frustrating situation' (Southgate 1970). When the majority of a school's books are on permanent display, children tend to pick them up, glance through them and, especially if they are too difficult, put them down again. As far as the children are concerned, they have seen these books; they have finished with them. This is a particular danger in vertically-grouped schools, as after a year or so, children feel familiar with all the books in their room and so there is nothing new to stimulate them.

Static book displays combined with insufficient guidance can be responsible for encouraging children to dabble with books rather than to become absorbed in them. While opportunities to browse among books are valuable, the practice of allowing or even encouraging a child to be continually handling and glancing at books, without this activity frequently leading to lengthy periods of absorbed reading of one of the books, can be harmful. If it frequently happens that a child who chooses a book because of its attractive cover, intriguing title or interesting pictures, finds it is too difficult for him and so quickly abandons it, he is receiving harmful training. This child may be learning:

> The appearance of books is often deceptive.
> I can enjoy pictures but not understand words.
> Books are too hard for me.
> I shall never learn to read.

Such practices can form a breeding ground for reading failures. On the other hand, if the teacher can guide the child to make his own choice from a collection of books at his own level, success will be assured.

Both the miscellaneous collection and the graded collection of books are necessary. The graded books could be on different shelves or marked with distinctive bindings so that every child can always know where to find something of interest which both he and his teacher realize he will be able to read. The graded books might include all the books in the school other than picture books, alphabet books, picture dictionaries and so on; 'big' story books; books belonging to reading schemes being used for teaching purposes; other instructional books e.g. phonics; encyclopedia, reference books and dictionaries; and information and topic books – although there may be something to be said for including these at a later stage.

The method of grading books should be agreed upon by all the staff. To be practicable, the selected method should be simple and not too time consuming. There are various readability formulae available (Gilliland 1972) but most of them require more time than teachers have available. Some publishers suggest reading ages for certain of their books and a few graded book lists are published. These are listed at the end of this paper, e.g. Atkinson and Gains (1973), Moon (1973), Pascoe (1962) and Raban (1973). The writer considers some of the gradings to be too difficult. A child can only read books on his own with fluency, comprehension and enjoyment, if he meets very few unknown words. McCracken ([illegible]9) suggests that one error in 100 words is the maximum level of acceptable difficulty for a child reading at an 'independent level'. The writer prefers a less stringent measure, namely a child reading independently should not encounter more than five new words in one reading session, i.e. in one complete story or in one slim book. There seems little value in a child *stumbling* through a difficult book when probably a few months later he could read five or six books at that level, in the same time.

This one step of setting up a system whereby children can have constant access to large numbers of books, which their teachers know to be appropriate to their particular stage of reading development, can prevent many reading failures, increase the number of children who read constantly for their own pleasure and achieve noticeable improvements in reading standards.

Habits of reading for pleasure

Children whose parents are not habitual readers are unlikely to develop the habit of reading for their own pleasure, unless teachers make specific plans to help them. First, these children should be read to often. The parents of preschool children and infants need guidance and encouragement on how and what to read to their children at home. Parents can also be used in school to read stories to groups of children. Teachers in junior classes should read frequently to children just as infant teachers do. Secondly, children should be helped to choose books their teachers know they *can* read. Thirdly, teachers may need to *contrive* many more opportunities for these children to enjoy reading to themselves. It is a rare primary school nowadays that does not have a book corner or 'quiet corner' in which children can read books of their own choice. Yet one might query whether the optimum use is made of them. It is frequently the bright child, the good reader, who has quickly completed his other tasks who uses the book corner most. Furthermore, constant movement and activity in a room is not always conducive to the development of habits of personal reading in the restless, easily distracted child.

In connection with contrived situations Mork (1972) first amused the writer and then made her wonder if its introduction into some informal schools might not prove valuable. The article reported that in certain American schools times are set aside when everyone undertakes *uninterrupted*, *sustained* and *silent* reading. The three words in italics are meant to be taken literally, with the possible exception of silent when applied to the youngest children. The first such period may last only five minutes but the time is lengthened gradually as children become able to sustain their interest and attention, until periods of thirty minutes or more become regular and enjoyable features of school life. They are the means of helping children to acquire the habit of reading for pleasure. If the teacher follows the suggestions put forward earlier for ensuring that the selected books are at the child's level, this activity should have a good chance of success. (Should you wonder what the teacher is doing during these periods, the answer is that the teacher is also reading for his or her own enjoyment, which might be another good reason for experimenting with some such system!)

Conclusions

It has been suggested that informal primary schools may be defined in terms of the removal of barriers to learning, but that something more positive may be required if children's progress in reading is to be maximized in such situations.

The advantages and disadvantages of informal schools, as far as reading is concerned, have been listed and suggestions put forward of certain ways in which the disadvantages may be overcome. These involve more staff discussions, an increase in teachers' own knowledge about reading and an improvement in methods of monitoring children's progress. These last two points may be summarized in the following question which teachers might ask themselves. 'If I don't realize what has to be learned (i.e. the total task) and I don't know where the child has reached in the different areas of the task, how can I either teach him or plan for his successful learning?' Proposals have also been put forward for planning a more effective use of the available books and for helping children to become habitual readers.

Behind these suggestions lies the belief that successful reading tuition requires a combination of planned teaching and guidance with self-motivated learning, but that the most effective balance between the two will only be achieved by careful planning. A quotation from a paper presented in Detroit (Southgate 1973) illustrates how the writer regards this balance:

> In all reading tuition the first aim should be to produce children and adults who want to read and who do read; the second aim should be to help them to read effectively. If the second aim is given priority, it is probable that the first aim will never be achieved. In other words, neither recreational nor functional reading can be expected to be the end product of extended, intensive instruction in reading skills. Reading must consist of recreational and functional activities from the very beginning. Direct instruction should be brief and should be timed to fit in with the needs of the child and not with those of the teacher.

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Part 5
Extending reading

15 A careful look at dictionary use in the middle grades

Marion Turkish

Introduction

There is no doubt as to the importance of the dictionary as a reference in all areas of the school curriculum. Strickland (1964) pointed out: 'It seems tragic so many children leave school thinking of a dictionary as a dull book to be evaded if possible rather than a mine of riches available for the taking'.

According to Mower and Barney (1968) the dictionary is probably the most used and least understood of all books. Downing (1972) commented on the quality of children's dictionaries. He indicated that children's dictionaries are versions of adult lexicons and that these references do not consider the psychological needs of young people who are using them.

Perhaps those of us who teach should take another long concentrated look at the use of dictionaries in the classroom. Dictionaries are lifetime references and improving their use as well as their image is vital.

Lack of specifics

The lack of a specific sequential dictionary programme is very evident. Have you seen a scope and sequence chart involving dictionary skills? What skills should and could be taught at each level?

The idea that schools include the correct use of the dictionary is not new for Jenks (1895) proposed this very concept. Pickard (1933) sensed that high school students were deficient in dictionary skills and urged that a pre-dictionary programme be initiated in primary grades. He felt that such specifics as alphabetical order, locating guide words, syllables, and accents be introduced in grade four.

House (1944) claimed that fourth graders could use a dictionary key and also that certain youngsters in grade six could master phonetic respelling.

In 1944 Traube urged that the use of the dictionary be taught in the schools in sequential steps adapted to individual needs and capacities. Korey (1949) described activities and devices for teaching the major skills of spelling, pronunciation, meaning, hyphenation and capitalization for upper grades. She also encouraged informal dictionary use at primary level with more formal training starting at nine plus years.

Planned dictionary activities were proposed by Dawson and Bauman (1963). These two writers felt that children of eight years could use the dictionary for pronunciation and meaning. Smith (1963) indicated that in dictionary study the location skills should be developed first. Comprehension skills should come next to be followed by the pronunciation skills. Bush and Huebner (1970) presented a sequential chart of dictionary skills. They advocated the teaching of dictionary skills by means of twenty-three steps.

While many articles have been written regarding dictionaries and their use in the classroom, it is obvious that all the individuals cited feel differently about the skills. There is a discrepancy as to what specific skills should be included in each area and when these skills should be introduced and taught. Should skills be incorporated in written English, oral English, spelling, reading or the content subject areas ? Or, should dictionary study be part of every area of the school curriculum ?

Lack of teacher knowledge

Teachers lack specific training in their preservice training in regard to dictionary and dictionary skills. Mower (1965) investigated the dictionary knowledge of elementary education majors at institutions of higher learning in the state of Utah. He found that future teachers were not well prepared in matters involving the dictionary. Experienced teachers as well as dictionary experts supported Mower in his evaluation.

According to Heilman (1967) dictionary skills are often neglected because teachers themselves feel inadequate in their use of this reference. Harris (1970) indicated that many teachers learn to use the dictionary by a trial and error method. Lamb (1970) commented that it is difficult to understand why inservice and preservice teachers are given so little assistance in the use of the dictionary.

In an effort to make dictionary use meaningful to prospective teachers in *Teaching Language Arts* and *Teaching Reading* classes at the William Paterson College in New Jersey, the writer includes some of the following activities. Prospective teachers are required to go to children's libraries and examine at least five children's dictionaries. The introduction to each dictionary must be read. Many of these books are brought to class. Through examination and class discussion students are able to see and compare the various dictionaries as to size, word coverage, diacritical markings and format. Skills needed to use dictionaries are defined. Prospective teachers prepare lists of skills and mini lessons on dictionary use.

Lack of adequate testing measures

While current standardized tests do include some dictionary skills in their testing programmes, the use and manipulation of a dictionary itself is not required for the completion of a test. Buros (1965) cites three specific dictionary tests: the O'Connor's (1963) *OC Dictionary Test* which uses a dictionary page facsimile, Spache's (1963) *A Test on the Use of the Dictionary* which also uses a page facsimile, and Melville's (1951) *The Cooperative Dictionary Test* which is no longer available.

In an attempt to find out how well students can use as well as manipulate a dictionary Turkish (1972) developed the *Test of Specific Dictionary Skills* to be used with students aged nine to twelve. In order to complete the test, students were required to use a lexicon. The test covered four areas: location, spelling, pronunciation, and meaning. There were sixteen subtests in all.

If dictionary use is important in the classroom, teachers need specific measures to help diagnose students' strengths and weaknesses. The real measure of dictionary use is how well a student can manipulate and use his reference for a specific purpose. Are our current measures really evaluating the situation in a satisfactory way?

Lack of controlled research

Many articles are published in periodicals regarding dictionaries and dictionary study. However, there is a lack of controlled research in this area.

Some recent doctoral studies which have considered the dictionary are: Waterman (1964), Mower (1965), Sleeman (1966), Winkley (1965), Murphy (1969) and Turkish (1972). Turkish correlated the results of her *Test of Specific Dictionary Skills* with the scores obtained on a standardized reading test. Although the findings were limited to the specific population tested in Hillside, New Jersey, and the skills included on the test instrument itself, she found a high positive correlation between her test and the standardized reading test. This seems to suggest a strong relationship between the reading test and the dictionary test. Both instruments, shown to be reliable, were measuring analogous skills. Moreover, it was observed that as students advanced through the grades and their reading power increased, the ability to perform on the dictionary test was greater.

It should be noted that the entire issue of *Elementary English*, April 1964, is devoted to articles concerning the dictionary and promising dictionary practices. Since the publication of this specific journal, other periodicals have from time to time described teacher activities with alphabet dictionaries, word books, slang dictionaries, and word games.

Lack of knowledge about children's dictionaries

In *Books in Print* (1973) one will find a list of dictionaries. There are lexicons of all kinds; pictionaries, word books, alphabet books, beginner's dictionaries, intermediate dictionaries, junior dictionaries, senior dictionaries, collegiate dictionaries, and abridged and unabridged dictionaries. Special area dictionaries are also noted.

An examination of dictionaries at each level will reveal basic differences in the following: format, coverage, style, explanation, diacritical marks, recency, relevancy, organization, print and illustrations. Perhaps those concerned with the education of children should examine these lexicons carefully noting characteristics. Do we know what kind of dictionary is most appropriate for each and every child at each level? Perhaps some learners need special dictionaries? And which dictionary is most appealing to the learner? Answers have yet to be found to these questions.

Conclusion

In 1972 Lake expressed concern about the negative reaction to the dictionary and suggested that teachers make a special effort to correct this attitude. It seems that this could be done if teachers carefully examined basic issues and explored promising practices in regard to the dictionary. Perhaps then it would be possible to have a more positive reaction to the dictionary and truly look at this reference as 'a mine of riches available for the taking'.

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16 Improving the teaching of comprehension

Lillian R. Putnam

The word comprehension comes from the Latin prefix 'com' and the verb 'prehendere'. Literally translated it means 'to seize with or together'. We infer it means to get the meaning the author intended. The days of debate regarding 'decoding versus meaning' are almost over. We have accepted the obvious fact that both are necessary. Decoding without comprehension is useless; comprehension without decoding is impossible. Research has not yet clarified if comprehension is a general global factor, or whether it is a cluster of significantly different skills. Many of the skills which we formerly thought were distinct and separate, have not proved to be so. At present, about the only two skills which can be measured successfully and distinctly are knowledge of word meanings and ability to organize information in some way. This has important ramifications for improving comprehension in the teaching of reading. It means that we should not only concentrate on these two skills but also cover the other comprehension skills eclectically. As teachers, what practical things can we do to improve these comprehension skills?

Instructional level

A basic essential is that the child should be reading at his proper instructional level. That would include 95 per cent word recognition and approximately 80–85 per cent comprehension. An informal test consists of having the child read a section of approximately 100 words; he should have no more than five errors in word recognition and about four or five answers correct in comprehension. The comprehension questions should include factual, interpretative and critical types. If he fails to achieve this, the decoding problems are too difficult and he should be placed on lower level material. If he does achieve this, we can proceed with practical steps to improve comprehension.

Vocabulary development

This is a life-time process which starts about age one and continues throughout life. Teachers should present difficult new words in context, orally first, in an orientation to the story or subject matter. This prepares the child for the written material, arouses curiosity and establishes a purpose for reading.

Work with polysemantic words is particularly valuable. Have each child use the word 'run' in a different way. Then supply appropriate synonyms. There are some fifteen different possibilities. Knowing only one meaning limits comprehension. A child who knows 'run' only as 'moving quickly' is confused by the phrase 'a run on the bank'. A practical way to teach this is to have children draw pictures illustrating the various and different uses of these words.

Use Latin or Greek roots to develop vocabulary. Instead of memorizing long lists of meanings, prepare a humorous paragraph using one root to the point of absurdity: e.g. 'Jim donned his aqua coloured swim suit, strapped his aqualung on his back, picked up his aqua spear, hopped over the aqueduct into the aquarium in search of aquatic plants.' The relationship of aqua and water could hardly be missed! Children enjoy composing their own paragraphs and exchanging them.

Children frequently have difficulties in comprehension because of limited or erroneous knowledge of word meanings: e.g. a first grade teacher was demonstrating to her class how to say the Pledge of Allegiance to the Flag. She instructed them to place their right hands on their hearts and to recite the pledge. One child put his hand on his buttocks instead. When questioned by the teacher, he replied 'When my grandmother comes to see me, she gives me a big hug, pats me *there* and says, "Bless Your Little Heart".'

Concept development

Unfamiliar concepts cause problems in comprehension. Teachers can prevent this by relying on the other language art skills of listening, speaking and writing. Since they are all part of the language process, they reinforce each other. We should remember that learning proceeds through three basic levels:

> Level one — the sensory level in which learning occurs through the five basic senses;
> Level two — the verbal level in which children learn to hear words, relate them to meaning, and then to speak words with meaning;
> Level three — the graphic level in which children learn to read and finally write words.

Thus the sensory experience is gradually replaced by abstractions called 'words'. We can always facilitate comprehension by returning to the Level one — sensory level. An object which can be seen, felt and touched is best. A picture or diagram is second best. When in trouble with concept development, return to the sensory level!

Children frequently have difficulty with concept development, especially if chronology is involved: e.g. a Sunday school teacher had taught the Christmas story from the New Testament, concerning 'Mary, Joseph and the Babe' and the flight into Egypt to escape Herod the King. When asked to draw pictures of the story most children put Mary, Joseph and the Babe on a camel. Some children put them all in an aeroplane. When asked why, they responded that this was the *flight* into Egypt! One child had a fourth passenger up front. He explained that it was 'Pontius' the Pilot!

Disadvantaged children who lack experiences outside their local areas have great difficulty with many concepts in school. Items which we would expect would be concrete or factual are actually very abstract for them.

Questioning, thinking and discussion

The levels of questioning increase in difficulty from factual, to interpretive, to critical. Because the factual type is easiest to compose, easiest to answer, and easiest to correct, it is most frequently used. If we raise the level of questioning, it will raise the level of thinking, which in turn will raise the level of discussion. The reverse is also true; if we are content with lower levels of questioning, we can hardly expect higher levels of thinking and discussion. The best discussions are those which raise more questions and provide a new purpose for further reading.

Convergent thinking represents the analysis and integration of given or remembered facts. Because of the tight framework and established perimeters it leads to one expected answer. Divergent thinking uses given facts but encourages the thinker to pursue alternate solutions and generate unexpected answers. Frequently there is no one correct answer.

Direct training in divergent thinking can be started in prereading years. Young children can be trained to respond not only to the typical convergent type questions of 'who, what, when and where'; they can deal with 'why and how'.

Since critical reading is a goal in later years, it must be developed first as critical thinking. In prereading years this can be done easily by predicting the outcome of a story read orally to them. This task evaluates comprehension, develops imagination, and over a period of time, provides valuable insights into the child's personality. Analysis and discussion of cartoons is another prereading task which is effective for this purpose.

During reading instruction, the following tasks provide definite training in critical reading and divergent thinking:

identifying main ideas and supporting details
comparing and contrasting
classifying
seeing cause and effect relationships
forming generalizations
determining the author's intent
separating fact from opinion
proposing alternate solutions to problems
predicting outcomes of stories read.

A most effective technique is to present the child with two pictures — for example a kitten and a tiger. Ask him to compare the two. When he has

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finished his comparisons, instead of telling him that he was right or wrong, direct him to look at the reverse side. There he finds helpful suggestions: Did you compare them in size? in colour? in weight? in strength? etc.

Context clues

Context clues are of immense value in comprehension. Telling a child to use context clues is of little help. Instead, teach by separate example that they can be obtained from definition, from contrast, or comparison, by example, by analogy, and from the general tone of the paragraph.

Patterns of writing

In upper grades, it is helpful to teach children to recognize patterns of writing and paragraph structure. In any one paragraph the author may:

introduce the subject
state an opinion and provide reasons
propose a problem and offer solutions
draw a conclusion and present proof
present sequential steps in argument
appeal to emotion for persuasion
relate incidents to clarify a point
compare and contrast
list examples to support an idea
conclude with a summary
make a transition between subjects.

If the child is aware of these structures, comprehension is helped.

Transitional words

For slower children and remedial readers, teaching transitional words can assist them in faster recognition of the author's thinking:

contradictory: but, however
amplification: in other words
cause and effect: because, since
concession: granted that
contrast and change: despite, but
emphasis: above all, most important
equal value: likewise, similarly
order: first, lastly, next
summary: therefore, in brief

Teaching these transitional words helps the child to be alert to important changes.

Figures of speech
Figures of speech frequently cause misunderstanding and confusion in comprehension. Hyperbole and metaphors present the most difficulty. Hyperbole can easily be taught by reading the story of Paul Bunyan, and then having the children compare and complete sentences similar to these:

Paul Bunyan was so thirsty that . . .
Paul Bunyan was so hungry that . . .

Metaphor is more easily understood if rephrased to express a simile:

The cloud is a marshmallow
rephrased: The cloud is *like* a marshmallow

Main ideas
The ability to extract the salient points is a valuable aid to comprehension and organization of ideas. Instead of telling the child to do it, teach him how. Select a suitable passage from a social studies text. Present him with three statements. Two are absurd and one is correct. After he learns to choose the correct one, raise the level. Give him three statements in which one is composed of minor details, the other is a poor idea, and the third is a good main idea. Finally, present him with three statements in which there is a finer distinction between the expression of the main idea. This process gradually leads him to the ultimate goal of composing the main idea himself.

Study outlines
Directing or telling a child to compose a good study outline is of little help. Instead, teach him how to do it. First, present him with the three or four main ideas of a selected passage and have him fill in the correct supporting details. Secondly, reverse the process by giving him the supporting details and having him express both the main ideas and supporting details. This ability to make good study outlines is one of the most valuable skills to enhance and promote better comprehension.

Motivation
Getting the child's own motor running or creating and arousing in him a desire to get or know the information for his own personal use, is the strongest potential for developing comprehension. With it, the teacher has built-in motivation; without it, reading is merely a set of superficial tasks. The implication therefore, is that the content of the material should be meaningful, interesting and practical. It is essential that the child knows in advance why he is reading the material and of what use it will be to him.

17 The *Language Centre* project

R. G. Drake

Since the early 1960s multilevel reading programmes, mainly of American origin, have become increasingly used in British schools. During this period the advantages of a multilevel format have become well recognized; they allow each child to start at his own functional level, to work at his own working rate and to progress to more difficult materials at his own pace. Early multilevel materials, however, tended to concentrate on the development of reading skills in isolation from, rather than as a part of a total language development programme. Reading comprehension and word attack skills were given much emphasis but little attention was paid to the systematic development of listening, speaking and writing skills. In attempting to streamline the reading process no opportunity was given for discussion nor for creative writing to develop naturally within the child's reading activities. What seemed to be needed was an integrated, multilevel language development programme which while providing skill building materials in the separate areas of reading, listening, speaking and writing would also emphasize the way in which these skills relate in a total language programme. The Language Centre series was an attempt to meet this need.

Language Centre 2, for use with children in the seven to nine age group, was published in October 1973. *Language Centre 1* is planned for 1975 and *Language Centre 3* for 1976. The format of all three kits will be the same so that a detailed examination of *Language Centre 2* will also indicate the structure of Centres 1 and 3. The *Language Centre 2* kit contains the following components:

20 reading practice cards
100 reading cards
70 reading key cards

20 practice skill cards
100 skill cards
70 skill key cards

1 practice listenskill cassette
7 listenskill cassettes
1 teacher's introductory cassette

1 teacher's handbook
1 pupil log book

Each set of materials is graded into seven levels and a colour coding system is used for ease of identification and classroom organization. It is worth noting at this point that a child may be working at different levels in each of the skill areas. One child's listening skills may be less well developed than his reading comprehension skills in which case that child would be working at a higher colour level on the reading cards than he would be on the listenskill cassettes.

Reading cards

Organization
The reading cards are designed to develop the child's reading comprehension skills and to provide an interesting starting point for the child's free writing activities. The reading cards are graded in seven levels of difficulty ranging from 6.5 to 10 years. The grading of the cards has been established by the use of a carefully designed readability formula and by a sensitive control of the concepts used in the subject matter of the texts. The grading is as follows:

Colour	*Reading age*
Green (Practice level)	6.5
Red	6.5
Blue	7.0
Orange	7.5
Brown	8.0
Olive	8.5
Purple	9.0
Gold	10.0

At each colour level there are ten reading comprehension passages all at the same level of difficulty. The cards have an attractive open format which has allowed the artist to vary the position of the illustrations in relation to the text. Each card contains an interesting factual story which has been written at an interest level of seven to nine years. Although the cards are numbered 1 to 10 the child can select the cards in any sequence. The child in fact should be encouraged to look quickly through all the cards at his level and having examined the title and the illustrations to choose the passage which he thinks will be of most interest. Selecting his own card on the basis of interest will help to motivate the child to do well.

Comprehension questions
The reading passages are followed by a set of comprehension questions

which the child answers in his exercise book. The main emphasis is on literal comprehension skills involving recognition of details, sequences, comparisons, cause and effect relationships, stated explicitly in the text. At the higher levels questions concerning the reorganization of information are introduced. At the lower levels the questions are multichoice but are so framed as to require the child to write a sentence answer. For example, question 1 from reading card Red 1 'Elephants work for man':

Elephants are ——— very small
very weak
very strong

By asking the child to write a complete sentence we are helping to develop the concept of the sentence. The child also has an opportunity to reconsider his choice of answer while he is writing the sentence. This is in marked contrast of those materials which require the child to write a single letter answer A, B or C in which the letter itself has no direct relevance to the answer. At the lower levels a sentence answer is not always required but the child is asked to write a word or phrase answer. At the higher levels the child is encouraged to write a sentence answer although for the purpose of marking, a correct word or phrase answer will suffice.

When the child has completed the comprehension question he finds the appropriate reading key card and marks his own work.

Recording

At the back of the pupil log book there are reading progress charts for each colour level. Having marked his work the child enters his score as a block graph on the appropriate chart. This scoring procedure is an important part of the *Language Centre* operation as it enables both the child and the teacher to keep a day-by-day check on the progress being made. In a multi-level programme of this kind it is important that each child should fully appreciate that his performance is being judged against his own ability and not against the performance of any other child in the class. It also provides the information on which a child can be moved from one colour level to the next. Once a child has attained a score of 100 per cent on three consecutive cards this is a good indication that the child has learned the skills being covered at that level. It is a useful idea to keep card no. 10 as a 'check card'. The children are asked not to do card 10 until they think they are ready to advance to a higher level. The choice of card 10 is purely arbitrary and the teacher might prefer to use one of the cards which the child has not completed as a 'check card'.

When the child has completed the comprehension exercises, marked his work and recorded his score on his reading record chart he returns to the reading card to the section headed 'For you to do'. Here he finds an open-ended writing assignment which is related to the comprehension passage on that card. It is important that the child not only understands the comprehension passage but that he is able to use the concepts and vocabulary in the passage in his own writing. Only by using the vocabulary and the sentence structures in his own writing will the child fully appreciate their significance. The assignments themselves involve a variety of activities including drawing, painting and model-making as well as writing lists, stories, accounts and poems. Because of the multilevel nature of the materials the child will have done well on the reading comprehension exercises and is therefore highly motivated to do well on the 'For you to do' section. The subject itself is fresh in his mind and he has access to new and interesting words which he can now use in his own writing. These factors combine to enable the child to produce much more interesting free writing than usual.

Skill cards

In earlier multilevel reading programmes the comprehension exercises were followed by a further set of questions concerned with language structure and word attack skills. This arrangement presumably was based on the assumption that a child who is able to tackle a given level of reading comprehension is, by definition, also able to cope with a given range of word attack skills. There is little supporting evidence for this view and experience shows to the contrary that children vary considerably in their ability to handle comprehension exercises on the one hand and word attack exercises on the other. While some children have very good comprehension ability they seem unable to grasp the technicalities of the comma, the contraction or of the classification of words. Conversely, some children with limited comprehension skills cope well with the mechanics of language. In view of this, the reading cards in *Language Centre 2* concentrate on reading comprehension and the related writing assignment and the word attack and language structure exercises are covered by a separate set of cards — the skill cards.

The skill cards are colour-coded, increasing in difficulty from red through to gold. At each colour level there are ten skill cards. The charts on pages 142 and 143 indicate the range of skills covered by *Language Centre 2* and it will be seen that five specific skills are covered at each level.

Distribution of skills exercises

	PC	*Red*	*Blue*	*Orange*	*Brown*	*Olive*	*Purple*	*Gold*
Alphabetical order—sort single letters	X	X						
Alphabetical order—words by 1st letter			X	X				
Alphabetical order—words by 2nd letter					X	X		
Alphabetical order—mixed 1st and 2nd letter							X	X
Making words from jumbled letters	X	X	X	X				
Compound words—joining only	X	X						
Compound words—matching and joining			X	X				
Prefix un—	X	X						
Odd words out			X		X		X	
Statements and questions						X		X
Contractions—running words together				X		X		

Homonyms	X	X		X		X		
Rhyming words			X		X		X	
Plurals— add s or es					X			
Changing y to i before adding es						X		
Singular and plural possessive — 's or s'							X	
Quotation marks					X		X	
Base words +er (more) est (most)								X
Base words +endings — s, ed, ing								X
Commas marking off a series								X

Writing skills

It is clear from an examination of the skill areas covered by the skill cards that increased proficiency in these skills will be more apparent in the child's free writing than in his reading comprehension work. Only when a child uses a comma, question mark or compound word correctly in his own writing can we really say that the child has understood these points. This being so, the skill cards are as much a structured writing programme as part part of a structured reading programme. It is clearly important, however, that when a number of skills have been learned from the skill cards, the child should then be given an opportunity to practise these skills in his free writing. In some schools, teachers ask their children to practise the skills learned on the skill cards in the 'For you to do' writing assignment which follows the reading comprehension passage. This also helps the child to appreciate the relationship between the different language skills being covered by the reading cards and the skill cards.

Language development pictures

Fourteen language development pictures are contained in the pupil log book. Each picture is associated with one of the listenskill passages on the listenskill cassettes. Each picture serves two purposes: first as a stimulus for discussion and second as a preparation for the listenskill passage. When, for example, some children are ready to work on the olive listenskill passage 'Why the kangaroo hops' they first examine the related language development picture. They are encouraged by the teacher to talk about what they see in the picture and to discuss the possible relationship between the picture and the story on the cassette. Usually the teacher will draw out comments from the children by posing a series of questions — 'What is the kangaroo doing?', 'What can he see?', 'Where is the event likely to be happening?', 'Is any clue given in the picture to the question presented in the title — *Why the kangaroo hops*?' Some children will immediately guess that the scene is set in Australia since kangaroos are normally associated with this country. Depending on their knowledge of Australia they might use words such as 'aborigine' or 'bush' etc. Some children may wish to write down what they know about the subject before listening to the passage and then compare their facts with the taped information. Most of the pictures and listening passages being factual lend themselves to this kind of treatment.

When the children have discussed the language development picture in as much detail as they can they then close their pupil log books and are ready to listen to the story on the cassette. Of course, they will hear a great deal more about the subject when they listen to the tape and this will add to their knowledge of the subject. If they hear something said on the tape which they themselves have said during the discussion this will add greatly to their satisfaction. Once the listenskill activity has been completed children are then required to turn back to the language development picture and to discuss it again, this time with the benefit of having heard the story

Listening skills distribution chart

Skill	*Practice*	*Red*		*Blue*		*Orange*		*Brown*		*Olive*		*Purple*		*Gold*	
		A	B	A	B	A	B	A	B	A	B	A	B	A	B
Factual recall	5	5	5	4	4	3	3	3	3	2	2	2	2	2	2
Recall of sequence				1	1	2	2	2	2	2	2	1	1	1	1
Implication										1	1	1	1	1	1
Fact of fiction												1	1	1	1
Total questions	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5

on the tape. Now even the 'reluctant talkers' should have something to say and the fluent talkers will have also learned something additional from the story. Perhaps the most important aspect of this procedure is to remind all the children that the more carefully and the more efficiently they listen to the story on the tape the more they will be able to say about the language development picture in the following discussion. The language development picture has been drawn in an open style so that it can be coloured in by the children if the teacher considers this to be a useful activity.

Listenskill cassettes
Despite the fact that listening as a skill is more frequently used than reading, in the past its systematic development has been neglected. To begin with, language development generally is dependent on listening and in this respect it is important to acknowledge that hearing without assimilation is a feature of our modern world. A chart showing the listening skills developed is given on page 145.

When a child scores less than 40 per cent we can assume that he has reached his frustration level and it is not advisable for the child to proceed to higher levels. For the purpose of assessing the child's listening ability the questions must be answered after the first playing of the tape. Subsequently however the passages can be listened to as many times as the child wishes. It is also possible for the teacher to prepare an additional set of questions following each passage so that a child who scores badly after the first hearing of the tape can be re-assessed after listening to the tape a number of times.

Conclusion
Language Centre 2 is intended for use over a period of two years with children aged seven to nine. Its regular use ensures a steady development of skills parallel with improvement in the creative areas. One of the teacher's main tasks is to organize the work of pupils to give a balance between the skillbuilding exercises in *Language Centre 2* and the many aspects of creative work which are already a feature of primary education. It would be quite wrong to attempt to lay down a rigid schedule for the use of the various components in the kit. The *Language Centre* is designed to be a flexible tool, capable of being used in a variety of ways suited to the demands of not only individual differences but also the differing conditions of classrooms and schools. Normally, where standards tend to be average it is desirable to develop the skills of speaking, listening, reading and writing at the same rate. But within even a so-called 'average' class there are those children who are retarded or backward in one or more of the skills of language communication. There may be a few children who need extra language development before they can be expected to make any appreciable progress in reading and writing. These pupils will concentrate on talking about the language development pictures and listening and responding to the questions. Some will need to have the *Language Centre* programme in these areas supplemented with other materials provided by the teacher.

Other children who express themselves well enough in speech may be poor readers. An intensive programme on the reading cards may be their requirement. Some children will need individual help at even the lowest level reading cards. To make the giving of help to the individual possible, it is therefore essential to organize the class so that the necessary time is made available.

It is a mistake to think of *Language Centre 2* as a kit to be used during a certain period each day or even on alternative days. It is much more likely to serve its purpose when it is available to be used any time of any day. Groups of children can be sent to work with the kit when it is organizationally desirable — and not every child in a group need be working on components from the same area of the kit. At the same time the other children in the class may be involved in a wide variety of other work quite unconnected with the *Language Centre* materials. Again, the diversity of use of the parts of the kit must depend to some extent on the children's own enthusiasms. As has already been mentioned, this is more especially true of the activities in the 'For you to do' sections of the reading cards. Extended activities are obviously beneficial when the interest is sustained.

Apart from individual subject interests, a great deal of the motivation in using *Language Centre 2* is dependent on keeping the progress charts tidy and up-to-date. Progress that can be seen and compared with previous scores is the greatest possible incentive. *Language Centre 2* should be seen as a set of teacher-directed materials within which each pupil has a great deal of individual freedom and choice. The teacher's role is to direct operations throughout the class to ensure an even and balanced development of skills by each individual pupil.

18 The incidence and context of reading in primary and secondary schools

Terry Dolan

One of the most perplexing questions that a primary teacher may be asked is, 'What do you teach?' The usual answer is a rather uncertain 'children' followed by a vague reference to main subjects of specialization at college or to the year group currently being taught. It is likely that replies would come more readily to a question such as 'What do you spend most of your time teaching?' One would guess that answers which mention reading would tend to come mainly from teachers of infants and lower juniors, or from teachers in remedial education. It would seem from an inspection of the literature that the bulk of reading research is aimed at helping these very teachers by throwing light on aspects and techniques of beginning and remedial reading. The children to feature in such research have tended to be youngsters in their early years of schooling and a smattering of children of all ages who are finding it hard to learn to read.

Over recent years there has been a gradual increase of research into the process by which meaning is obtained through reading. This line of enquiry has inevitably involved children who are able to translate print into words, that is, older children and even adults with a certain proficiency in decoding. Together with enquiries into reading standards, this research accounts almost completely for reading research directed at children in the secondary school.

Few (save children) have looked at what children have to do to get by in our schools and what it is that teachers have lined up for their pupils. More specifically, there has been little research which investigates the reading demands made of pupils by teachers, what teachers expect children to achieve in the course of such reading and what, in fact, is gained by pupils from such reading. The Schools Council project *The Effective Use of Reading* directed by Professor Eric Lunzer and Keith Gardner in the School of Education at Nottingham University is enquiring precisely into such topics. The project centres on pupils in the last year of primary school and the first and fourth years of secondary. The first two age groups have been chosen to allow study of the new demands that are made on transition to secondary school and the way pupils respond to these. In the fourth year of secondary school pupils are either nearing completion of their education or preparing for public examination.

The present paper reports progress with one feature of the project, that of making an assessment of the actual extent of reading required of pupils in project schools as well as reporting the contexts in which these demands have been made. This is seen as an essential step for highlighting differences in educational style between the school years under investigation and, more particularly, between primary and secondary school; highlighting differences in educational style between types of primary school, open plan *versus* class-based, formal *versus* informal, and approaches used in secondary school, subject integration *versus* more traditional subject specialization; permitting analysis of methods by which reading efficiency is promoted; and in allowing teachers to assess whether the reading which has taken place in class was the best use of reading in the context of the aims and objectives of the curriculum.

The project began in September 1973 and is of three years duration. This time span allows the project officers only two chances to observe individuals who are transferring from primary to secondary school. The work of the team during the period of transfer in 1974 is seen as a preparatory study for a more searching and extensive investigation for the second period in 1975.

In the summer term of 1974, investigation was started in the ten project secondary schools and in sixteen of the primary schools which feed them. Data has been collected through three instruments which have been developed with the assistance of teachers drawn from project schools to form teachers' study groups. These instruments are now briefly described.

The Reading Behaviour Inventory (RBI)

This inventory allows for observation of a single child at a time. It comprises a minute-by-minute time-sampled record of the incidence of specified classroom activities of the child and the teacher, together with five minute sampling of the activities and grouping of the remainder of the class or group. It allows for a detailed record of the type of reading and writing observed plus an estimate of the length of reading observed minute-by-minute.

The teachers' questionnaire

This questionnaire, completed immediately after lessons, allows for a record of the teacher's assessment of the lesson activities and purpose, a statement of the reading which has been involved and an estimate of the importance and difficulty of this reading. Additional information concerns the place of discussion and writing in the lesson and an estimate of the length of time which children (or where appropriate a group or one child) spent reading.

The pupils' questionnaire

This questionnaire, completed under supervision after lessons (unsupervised in the case of homework) allows for a record of the child's view of the lesson, an estimate of the length of time spent reading and the number of words or lines or pages which have been written and read. It also includes the child's estimate of the difficulty of the reading matter from the points of view of decoding and comprehension.

The information presented in this paper was collected over a four-week period in the summer term of 1974. Children were selected for observation in accordance with the criteria that their class teachers judged them to be of at least average reading ability, and that the school was clear as to the secondary school to which the children would transfer in autumn. These criteria satisfied, the children were randomly chosen from the group in clearest view from the observer's vantage point. In general, children were unaware that they were under observation. However, when pupils' questionnaires were completed in conjunction with the RBI, children were told the purpose of the observation but only in the vaguest terms. The RBI has so far been used with primary children only. As far as possible, these children will be monitored in the autumn term.

Table 1 summarizes information gathered using the RBI. There were seventeen full days of observation. The seventeen children observed were monitored from the time they came into school in the morning until they left school at the end of the afternoon. For ease of summary, it was decided to divide the day into four sessions — before morning play, after morning play, before afternoon play and after afternoon play. The figures in the columns represent the mean incidence of behaviour samples recorded for each category over the seventeen day period. A one-way analysis of variance test (Scheffé test, Youngman 1974) was applied to data to see if there were significant differences in the distribution of recordings in the categories and to examine the spread of scores used to compute the means.

Some points of interest

Teacher

The only category of behaviour with statistically significant differences in the distribution of recordings is 'administrating' (registration, routine organizational activities, marking). This is brought about chiefly by the relative density of administration in the first period in the morning and the small number of recordings in the last session of the day. Other noteworthy trends are the increase in supervision over the day, partnered by a fall-off in individual tuition and occasions of informing.

Child

The chief interest in the child's section of the table is the significant fall-off in writing and reading over the day. This is countered by an increase in practical work — PE, art, etc. This may be an artifact. The weather was fine over the period of observation and a prolonged bout of wet weather might have changed the pattern. Another category with statistically significant differences in the distribution is 'Child not involved'. At first sight this is startling. In the very session when most work appears to be done, the

Table 1 Mean daily incidence of recordings on the RBI

	Morn 1	*Morn 2*	*Aft 1*	*Aft 2*	*Morn*	*Aft*	*Total*	*F-ratio*
Teacher								
administrating	21	13	13	4	34	17	51	sig
supervising	22	16	22	29	38	51	86	—
informing	9	8	7	5	17	12	29	—
discussing	4	2	7	3	6	10	16	—
questioning	4	3	4	3	7	7	14	—
indiv. tuition	13	11	8	8	24	16	40	—
writing	2	2	1	2	4	3	7	—
reading t.s.	4	2	2	1	6	3	9	—
Child								
administrating	9	6	8	7	15	15	30	—
waiting att'n	3	2	3	2	5	5	10	—
not involved	11	7	6	4	18	10	28	sig
listening	16	10	14	4	26	18	44	sig
observing	1	1	3	4	2	7	9	—
answering	1	1	1	0	2	1	3	—
questioning	1	0	0	0	1	0	1	—
discussing	4	3	5	3	7	8	15	—
practical	12	8	16	24	20	40	60	—
calculating	4	4	0	2	8	2	10	—
writing	11	7	5	3	18	8	26	sig
reading t.s.	12	10	6	4	22	10	32	sig
reading (mins)	7	6	3	2	13	5	18	sig

all figures rounded off sig < 0.05

children have more occasions of non-involvement. Explanation is fairly simple. To begin with, the session is the one which contains school assembly; secondly, when teachers are engaged in individual tuition for any length of time there is more chance of undetected resting; and finally, these periods of rest are quite predictable in the light of the sustained effort observed in this session in the day.

Table 2 The incidence of reading and writing, subject by subject

	Average daily length of reading	*Total reading over 17 days*	*Total number of writing time samples*	*Copying from text or from blackboard*	*Reference work from text (not copying)*	*Answering questions not using text*	*Writing without reference to text*
Reading of library books and between lesson reading	7.6 mins	129 mins	—	—	—	—	—
News books, diaries, personal writing	—	—	41	6 (15%)	4 (10%)	3 (7%)	28 (68%)
Mathematics	2.7	46	91	6 (7%)	0	85 (93%)	0
Assembly, hymn singing	2.0	34	—	—	—	—	—
Geography and history	1.6	28	47	36 (77%)	0	0	11 (23%)

Music	1.4	23	0	0	0	0	0
Topic/project	1.2	21	92	14 (15%)	17 (18%)	5 (6%)	56 (61%)
Scripture	0.3	5	16	0	16	0	0
Science	0.2	4	30	7 (23%)	23 (77%)	0	0
English	2.7	45	128	20 (16%)	2 (2%)	41 (32%)	65 (51%)
Daily total	19.7	335	445	20%	14%	30%	36%

It is interesting to examine each subject taught to see the incidence of reading observed, and the incidence and type of writing sampled. Table 2 provides this summary. Overall, an average of twenty minutes reading per day per child was recorded (rounding off numbers produced the daily total of eighteen minutes in Table 1). One third of the twenty minutes saw the child with a library book, reading for pleasure. No single subject involved an average total length of reading of more than three minutes per day. However, taken in conjunction with the writing samples for each subject, it is clear that English, mathematics and project work involve lengthy spells of writing. It is somewhat artificial to separate reading from writing, when clearly the nature of the writing influences the nature of the reading involved. From Table 2 one can see the percentages of the four categories of writing recorded on the RBI for each subject: 20 per cent of all writing was outright copying from the blackboard or from texts; 36 per cent of all writing was of a personal nature in that it did not involve any reference to written material (creative writing, news books, diaries, etc); 30 per cent involved answering questions set in class or in a book but with no further reference to texts. Only 14 per cent of writing involved reference work where the child consulted a text, taking or making notes as opposed to sheer copying.

Table 3 Distribution of estimates of the duration of reading per minute, subject by subject (**percentages**)

	1	*2*	*3*	*4*
Reading of library books and between lesson reading	31%	20%	13%	36%
Mathematics	70	26	4	0
English	58	27	9	6
Geography and history	58	20	13	9
Assembly, hymn singing	23	24	8	43
Music	38	22	28	2
Topic project	67	28	3	1
Scripture	68	27	5	0
Science	71	29	0	0

1 = 1 to 15 seconds 0.125 minute's reading
2 = 16 to 30 seconds 0.375 minute's reading
3 = 31 to 45 seconds 0.625 minute's reading
4 = 46 to 60 seconds 0.875 minute's reading

The method of recording the amount of reading noted in any one minute was to record estimates of the reading observed on a 1 to 4 scale. A recording of 1 signified a period of reading from 1 to 15 seconds; 2 — between 15 and 30 seconds; 3 — between 30 and 45 seconds; and 4 — from 45 seconds to one minute. Overall scores were computed by converting the recorded figures to eighths of a minute reading — $1 = \frac{1}{8}$; $2 = \frac{3}{8}$; $3 = \frac{5}{8}$; and $4 = \frac{7}{8}$. It is interesting to examine the distribution of such recordings subject by subject (see Table 3).

The figures in any subject area are the percentage of each type of recording for that subject in relation to all four categories of recording 1–4. It is striking to note that only with library and reading sessions do children engage in sustained reading. The prolonged periods of reading in music and hymn singing refer to reading words whilst singing. It is tempting to ask just when it is and how it is that children acquire strategies for reading for information.

The findings presented in this paper need to be interpreted with some caution. The RBI still has imperfections. Some categories which have been specified embrace several activities and are consequently rather crude indices. At the same time, it has been admitted that the weather was fine during the period of observation so that children could enjoy spells of outdoor activities. One might also argue that children in their final term in a primary school may be 'demob happy'! Until many more observations have been made over a lengthier period, then the figures presented need to be treated with care. The most that can be said is that the information relates to seventeen days of very painstaking observation and that teachers assured observers that no activities had been specially arranged for the research.

As to the time sampling technique, at best it can only be an approximation of what happens in class. As more children are observed then the observed pattern reaches towards representativeness. At worst, the technique can never satisfy one of the chief aims of the Schools Council project — that of investigating the quality of school work resulting from various types of reading and out of several contexts.

Teacher and pupil questionnaires

A striking point to emerge from examination of the responses is the almost 100 per cent agreement between teachers and children concerning the purpose of the reading in lessons. A further point concerns the ability of primary children with regards to judging the difficulty of reading tests. Although several children had no difficulty with decoding, they considered the reading 'hard' because the associated task or problem, in arithmetic for example, was difficult.

Teacher questionnaires were completed by teachers in two very large comprehensive schools associated with the project. Data refer to three content areas and to two age groups. Table 4 provides a summary of the teachers' estimates of the reading involved in lessons which they had just taken. As with the RBI, one cannot claim, at this stage of data collection, that the information is anywhere near representative. A further problem concerns teachers and pupils estimating reading. On occasions where the RBI has been used in conjunction with questionnaires in primary schools, it has to be pointed out that whilst there is close agreement between teachers and children over the length of reading in lessons, both are at odds with the RBI record in that estimates are well over the mark. Unfortunately, at this stage, joint use of pupils' and teachers' questionnaires has been limited to primary schools so no indication can be given about the accuracy of the secondary teachers' estimates.

Table 4 Teachers' estimates of the duration of reading in English, mathematics and social studies lessons in first and fourth year classes (secondary)

		Lesson units	*Average duration of reading in all lessons*	*Average duration of reading in lessons which involved reading*	*Average length of longest continuous period of reading*
English	1st year	24	12 mins	26 mins	10 mins
	4th yr	23	11	14	7
Maths	1st yr	17	13	13	1
	4th yr	15	3	7	1
Social studies	1st yr	20	11	21	5
	4th yr	16	4	17	15

lesson units = total number of periods
single period = 1 unit: double period = 2 units

Estimates for the average duration of reading for all lessons of first-year children are much the same for each content area. Although the duration of reading in fourth year English lessons works out similar to that of the first year lessons, there is a clear fall-off in reading in mathematics and social studies lessons. The figures are a little misleading as no reading whatever occurred in some lessons. A different pattern emerges if one turns to those lessons in which reading did take place. The average duration of reading in first year English and social studies lessons is now considerable. In mathematics lessons, the duration of reading has not changed and this can be taken to indicate that reading occurred in all lessons reported. Fourth year lessons in all areas witness a marked drop in the amount of classroom reading. Unfortunately, the teachers' questionnaire did not request estimates of writing demanded of children but it is more than likely that the apparent fall-off in reading is counterbalanced by an increase in written work.

Table 5 Reading material used in English, mathematics and social studies lessons for first and fourth years of secondary school

	E1	*E4*	*M1*	*M4*	*SS1*	*SS4*	
Textbook,	3	5	1	1	3	1	Essential
course book	2	3	3	4	0	2	Important
Reference books	0	0	0	0	1	1	Essential
	0	0	0	0	6	0	Important
Novel, story, narrative	4	5	0	0	0	0	Essential
	1	1	0	0	0	0	Important
Blackboard	1	0	7	3	0	1	Essential
	3	1	0	5	2	0	Important
Other (v.a.s maps,	2	9	0	0	8	2	Essential
pamphlets, workcards, etc)	2	2	0	0	7	1	Important
lesson units	24	23	17	15	20	16	

E1 English 1st year M1 Maths 1st year SS1 Social studies 1st year
E4 English 4th year M4 Maths 4th year SS4 Social studies 4th year

Table 5 reports the reading material used in lessons in the three content areas, together with an index of the importance which teachers attach to the reading. Course and text books feature in all areas but less prominently in mathematics. However, the blackboard is much in use in mathematics lessons. Reference books do not appear to be particularly used in any content area, except perhaps with first year social studies. This may reflect the growth of topic work in the lower years of secondary schools. The greatest variety of reading matter is to be found in English lessons. The range of this reading material increases up the school. By contrast, reading matter in mathematics is fairly constant between first and fourth years, whilst in social studies lessons the range actually decreases.

It is premature for conclusions to be drawn from this research. Clearly, there are pointers which will direct future action — observation of primary education in the autumn and spring terms, and a closer look at the writing demanded of children across secondary education. Observation in primary and secondary schools needs to be intensified before any valid comparisons can be made, or before there can be any pronouncement on the marriage of primary school and secondary school curricula objectives. The findings which have been reported suffer from being based upon work in a small number of schools and on observations made in the early stages of the project at a time when the central issues had yet to be adequately resolved. The results of the research will be presented in the form of a report at the end of the project by which time a more comprehensive overview will have been obtained, and commentary will be richer in the light of the analysis of the effectiveness of the observed reading.

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Part 6
Issues and problems

19 Reading disabilities: diagnosis and remediation

Gilbert R. Gredler

Over the past several years, American parents have been concerned about the education of their children to an unprecedented degree. Concern has also permeated every section of the educational community. No longer is criticism restricted to suggestions for curriculum reforms but the basic fact of compulsory schooling itself is questioned (Illich 1971). It is charged that children have learned to consider themselves inadequate persons with a lowered self-concept because of the inadequacy of their schooling (Mosher and Sprinthall 1970).

Some educators see the increased awareness in children's learning difficulties as another fad which the educational establishment must bear. Velluntino and Sipay (1971) mentioned that the interest in the 'disabled learner' now occupies a position of importance formerly held by the mentally retarded, brain-injured and emotionally disturbed. They charge that such children are not accurately diagnosed; that the teacher has little time to explore the cause of the failing child's problems; that the school psychologist or educational specialist generally does not have the expertise to do more than assess the child's intelligence and that the remediation generally offered profits the child but little.

Some factors of importance

Stott (1971) advocates an approach that would look primarily at behavioural handicaps to learning rather than psychometric and/or perceptual variables. Stott calls for a careful analysis of the unproductive learning styles of the child with learning problems. He defines attentional failure as due to the, 'child's failure to get sufficient information about a task because he does not give himself time to look properly — "he doesn't use his eyes" ' (p. 11). He would not necessarily tie this failure in attention to general maladjustment but would say that it is linked to an avoidance of learning tasks because of prior failure in such tasks. Such avoidance in turn can be linked to undue pressure from teacher or parent.

Stott would also say that 'lack of attending' may be responsible for the low scores on perceptual tests, but instead of automatically postulating an inherent 'perceptual deficit' and programming the child for a perceptual programme, he would instead emphasize the organization of a programme whereby the child can learn, 'by carefully regulated experience that he can cope with the learning tasks' (p. 29). In other words his approach deals specifically with attempting to improve the overall learning style or strategies of the retarded reader and considers such strategies as primary rather than secondary.

Clearly an increasing number of psychologists and educators in the USA and Canada have begun to emphasize the importance of learning strategies and it would indeed appear to be a more productive aspect of investigation than simply attending to one restricted facet of malperformance of the retarded reader whether it be a visual perceptual deficit, auditory perceptual deficit or lowered intelligence. The answers to primary causes and treatment approaches for the child with reading disabilities will probably never be forthcoming through utilization of one treatment approach.

Lending support to the importance of learning styles are the results of several recent studies. One such investigation involved looking at the problem-solving strategies of reflective and impulsive children. Galt (1973) investigated such strategies in three groups of children whose mean age ranged from 6:7, 8:8 to 10:9. Children were considered impulsive when they responded rapidly and made many errors in a twenty-questions game and children who were slow to respond and made few errors were considered reflective. She found that impulsive subjects asked less mature questions than reflective children. Obviously such results have definite import for curriculum building.

Campbell *et al* (1971) reinforce the importance of considering the learning style of the child in their investigation of cognitive styles of hyperactive children. They contend the impulsive approach that these children employ may be sufficient to explain their learning difficulties in school without having to invoke the idea that a specific cognitive deficit may be present.

Sykes *et al* (1973) investigated variables pertaining to sustained attention in hyperactive children. One aspect of their project was to study the relationship between degree of attentional deficit shown and the length of time attention has to be maintained on the task.

Their investigation showed that hyperactive children do show an attentional deficit and that the degree of deficit is clearly related to a time factor. The hyperactive children were unable to maintain attention over a prolonged, but not short, period of time.

Sykes *et al* also offer some down to earth ideas concerning the educational implications of their results. They suggest that since sustained attention of such children is subject to frequent brief lapses, presentation of new material to be learned should be given in short steps. They also suggest the child take a short rest from the task in which he is engaged and that the child, rather than the teacher, should be the major determiner of the pace in the presentation of new material.

The use of previewing

Sykes's conclusions are similar to the results obtained by Scheiner (1971). Working with boys in the chronological age range of eight to nine and who

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had either repeated a grade or received remedial instruction Scheiner used a previewing technique as an aid to oral reading. The investigation consisted of four parts: first the child read orally from a reader while the psychologist noted the correct responses and errors. In the second stage which consisted of ten sessions, the child listened to a tape recording of the next part of the story. Following the listening period the child was asked to read and error and correct rates were again noted. In the third stage, the child was given the book and was able to follow each word as it was printed in the book as he listened to the tape recording. Following this period of looking and listening he was requested to read the passage. In the fourth and final stage, the child repeated what he did in the first stage: he read from the text without any kind of previewing help.

Briefly stated the results indicated that both listening or a combination of listening and looking at the story prior to reading proved to be effective in improving the reading performance of the children. As Scheiner states:

> The primary advantage of previewing reading materials is that it allows reading disabled children to use cues such as story meaning, inferential thinking and immediate recall to aid visual memory in reading. The children in this project had greater confidence reading under the previewing conditions, and seemed to like it better, as judged by their attendance, and the number of defensive statements made during the sessions.

Simply stated this is another approach in providing an educational environment where the child was given reinforcement in the reading process, within a brief time period, and the net result was to improve reading performance by a respectable margin. It is important to consider such inexpensive methods in working with the inattentive child and or the perceptually-impaired child before launching into an expensive remediation programme. A major factor here would be the importance of training volunteers to carry out such a programme. Concurrently there would be a need to reorient the time periods of the school schedule so as to incorporate such a programme.

Obviously there are a number of different factors involved in producing reading retardation. It is indeed possible, as Vernon (1971) suggests, that the cognitive and perceptual development of children retarded in reading has matured more slowly thus resulting in perceptual performance and errors characteristic of younger children. At the same time, it is known that many retarded readers have unproductive learning strategies yet show minimal deficits in auditory and visual perceptual performance and also show no evidence of motor impairment (Gredler 1973, 1974). The logical conclusion in considering such data is that the individual specialist called in for a diagnostic study of the child failing in reading must be prepared to look at a broad spectrum of contributing factors (Gredler 1963).

Specific studies of learning strategies

It is important to consider the value of planning the type of strategies to use in working with the retarded reader. Moyle (1970) has mentioned that all too often the diagnosis and remediation of reading difficulties is unsystematic and inadequate. He speaks of the Mills Learning Methods Test as an approach whereby a child is taught by different methods. The idea behind the test is to try to find the way in which a child learns most easily and attempt to utilize such information in the educational planning for the child.

Cooper (1969), using a revision of the Mills Learning Methods Test, studied the differences in the learning modalities of good and poor first-grade readers of normal intelligence under four different methods: visual, auditory, kinesthetic and a combination approach. The visual modality involved stressing the word length and configuration; the auditory modality stressed the sounding out and blending of syllables — basically a phonic approach; the kinesthetic approach emphasized tracing and copying the syllable; and the combination approach utilized parts of all the above approaches.

Cooper noted how many trials it took for a child to learn five syllables under each teaching condition (i.e. the acquisition score) and twenty-four hours later he measured the child's retention of the syllables under each condition (i.e. retention score). At this time we will be concerned only with the results of the acquisition of these new words under the four teaching conditions. Cooper found that good readers were able to learn new syllables in fewer trials than poor readers, regardless of the modality approach selected.

Average number of trials needed to learn syllables

Modality approach	*Visual*	*Auditory*	*Kinesthetic*	*Combination*
Poor readers	6.1	6.5	7.4	8.3
Good readers	2.8	2.1	1.5	1.7

Second it was found that no modality approach was significantly better for good readers as a group or poor readers as a group. Poor readers tended *not* to learn best by the kinesthetic modality. Good readers tended to learn best by the kinesthetic modality.

While no one modality or mode of learning was found to be definitely best for the *group* of poor readers or the *group* of good readers, significant differences were found in several *individual* cases as to the importance of modality preference. Given below is data on four children which will illustrate the differences found.

Trials needed to learn new syllables

Modality approach	*Visual*	*Auditory*	*Kinesthetic*	*Combination*
Poor reader 11	4	10	3	10
Poor reader 41	3	2	10	10
Good reader 180	1	1	1	1
Good reader 147	2	2	4	3

The results of this study raise several points of educational significance. Many American teachers and specialists are convinced of the value of the kinesthetic method for helping all poor readers. The data from Cooper's study does not support the unrestricted use of that method as an aid for poor readers. Secondly it can be concluded, as many of us have already suspected, that poor readers form a very diverse group. This study impresses upon us the significant differences among poor readers as to modality preference. As data from the above table indicates, some poor readers were able to learn new syllables much more easily via one modality than through another. This is one piece of additional information needed to make educationally-relevant decisions on how to help a child who is a poor reader. A number of American educators have reified the importance of the modality approach to the extent that they base their whole approach to the child's educational difficulties on diagnosis of this one factor alone. Equally significant, of course, would be the climate of the classroom, the kinds of curriculum materials in use, the lack of stress and anxiety within the school personnel and child and the competence of the teacher and specialist.

Further questions to raise

In reviewing the problems of the reading disabled child and the myriad factors involved, the question ultimately arises as to how we can best help such children learn more adequately. The ultimate goal is for the child to be able to successfully perform within the regular classroom structure or organization.

The simplest solution to take care of the child who has failed or who is performing very poorly academically in American schools has been to have him repeat a grade. The second most popular approach is to suggest his removal to a special class so the school can better treat his deficiencies be they emotional, perceptual or intellectual. When a country is rich in resources a higher level of removal is tolerated, for such a society can more easily afford the cost of extra classrooms, teachers and the whole array of specialists which are part of the process. However, even within the same society there are considerable differences from school to school within a school system as well as state and regional differences as to how extensively the removal process is undertaken.

When children begin to fail, reasons have to be found. And it would seem obvious that if school personnel always look for causes internal to the child, the situation becomes ripe to find more children who are purported to have emotional problems or specific perceptual deficits of one kind or another. Reading retardation is thus treated differently from system to system. Reading performance considered acceptable in one system is found to be unacceptable in the other. Thus our definition of retardation and provisions for such children is found to be partially determined by what school personnel perceive to be adequate performance. One implication of such a state of affairs is that the population of children with 'reading disabilities' will be quite heterogeneous and care is therefore needed in arriving at a valid population of children with reading disability.

Efficacy of treatment approaches

In a recent study Evans (1972) found no difference in reading comprehension gains of ninety fourth-grade children given a remediation programme when compared to a control group of ninety children of the same grade and level of reading achievement.

Evans points out quite carefully that we cannot automatically assume that individualized instruction of the type given in the remedial class is useless. The factors she mentions as possible contributing ones should be asked of all remediation programmes of any type. They are:

1. Is the reading programme based upon an adequate analysis of the child's deficiencies and needs?
2. Is the negative self-concept of the child reinforced by his poor achievement and his placement in a special remedial class?
3. Do teachers expect less from children referred for remedial treatment?
4. Are the children so frustrated by failure that they become reluctant to try?

In commenting on this last factor the writer, who is Director of a university remediation centre, can testify to the overwhelming reluctance and anxiety of the majority of children referred to the centre when first introduced to reading materials and tests at the centre. The reluctance has been of such degree that many children will not respond at all when first given a reading test. With increased opportunity for positive social interaction with the clinician in a nonthreatening environment, most children are able to respond satisfactorily to the test demands.

A good example of the difficulty in assuming that the remediation provided by a special class will pay off in improved performance is seen in Willis's (1969) study. Five highly-trained teachers who had eight emotionally disturbed children each in their classes were studied. The teachers were asked to rate each of the eight children in their five classes on a continuum of learning behaviour. This rating was on a scale ranking from the most efficient learner (ME) down to the least efficient learner (LE). The top- and bottom-ranked child in each classroom were then chosen as the children to be studied and these children were then observed in daily interaction with their teacher. Briefly stated it was found that:

1 When ME and LE children were asked questions, teachers responded more frequently with an answer for the ME child.
2 When ME and LE children gave an answer in class, the LE children were also ignored more frequently than the ME students.
3 When ME and LE children engaged in behaviour which was not acceptable for the classroom setting yet could be considered neutral (i.e. the child is supposed to be doing academic work at his desk but is looking at other children) it was found that the teacher ignored such behaviour to a much greater degree with LE children than ME children.

Willis concludes that there is less interaction with the teacher and the LE child. She also states that the teachers probably are a primary influence in increasing the frequency of verbal interaction of the ME child by engaging in more talking behaviour and ignoring his behaviour to a lesser degree.

Willis's study clearly indicates that certain children were discouraged in the classroom from interacting on a verbal level with the teacher. And these were teachers who had been carefully screened, given an extraordinary amount of training, and who had an extensive network of consulting and backup services available. Beez (1969), using positively- and negatively-worded psychological reports in order to change teacher expectations, found that:

> Teachers who had been given favourable expectations about a pupil tried to teach more symbols than did the teachers given unfavourable expectations. The difference in teaching effort was dramatic. Eight or more symbols were taught by 87 per cent of the teachers expecting better performance, but only 13 per cent of the teachers expecting poorer performance tried to teach that many words.

These studies do *not* show that special classes or programmes are lacking in value but rather how complicated and difficult it is to provide a beneficial treatment programme for children who are having school difficulties.

Important programmes which worked

In an extensive study of improving the reading ability of children who ranged in age from 7:0 and 9:11 (Burkholder 1968) utilized a programme which attempted to develop the underlying abilities of children which appear to be linked to reading. Psycholinguistic deficits as measured by the ITPA were noted and a careful programme based on the subtests of this battery was then used in the remediation programme, which was three months in length. Gains in such reading skills as oral reading, study skills and working meaning were noted after the treatment programme. *And,* most important, the gains were maintained in oral reading and study skills after a period of six months.

Burkholder states that the most important variables operating in this remediation programme were the following: the use of special materials, carefully prepared; the programming of the presentation of such materials in small graduated steps; the introduction of a different teaching personality, one from without the school environment; a positively reinforcing environment which was probably aided by the small-group structure (i.e. groups were made up of four to five children) and a relaxing atmosphere when errors could be made without fear of punishment (Burkholder p. 92). It would appear that the gains most probably resulted from a complex interplay of a number of these factors operating over the treatment period.

In another major treatment effort Hayes (1967) investigated the role of prescriptive teaching as a supplement to behaviour modification with the remediation of learning disorders. Groups of children ranging in age from 8:6 to 11:6 and whose IQs ranged from 89 to 104, were separated into a learning deficit treatment group (deficits were determined by performance in a psychologuistic test), a behaviour modification group, a group combining both approaches, and, of course, a control group. Results of the study indicated that the combination of an approach which attempted to pinpoint learning deficits in children with learning problems and provide treatment on such diagnostic data, in combination with a behaviour modification programme, produced the most significant gains. Quay *et al* (1972) found that a token reinforcement programme was of help in producing achievement gains in children who showed reading retardation. In an excellent study Lawrence (1971, 1972, 1973) emphasized the value of counselling help provided by volunteer adults in producing a higher level of performance in reading. Allen and Feldman (1973) studied the value of peer tutoring in helping children with reading disabilities and Gredler (1974) found that the emphasis on an informal atmosphere, with no threat of punishment, in combination with the use of sophisticated curriculum material and with motivated and empathetic clinicians, produced extraordinary gains in reading in a number of reading disabled children.

How can we reconcile the use of these diverse approaches, all of which produced some gain in reading performance of the children involved? Indigenous to all remediation or treatment programmes is the fact that when we work with the reading disabled child we change what we do to the child. As Parsons (1974) states, 'We give him different materials, we make different demands, we place him in a different physical environment and lo and behold he begins to learn.' Parsons would go so far as to say that we have not changed the child in any fundamental way but rather have changed ourselves. While one may dispute the statement that a child or his learning style is not changed under a well-conceived programme of remediation, it nevertheless is quite accurate to say that with a well-organized remediation programme different demands are being made, with a different environment a reality, and frequently highly motivated and empathetic adults are introduced to aid the children in the programme.

Further, another common thread with all of the children involved in remediation is that the failure experience has been universal. It is perhaps the reaction to the failure experience and its meaning to these children which has been looked at to an insufficient degree by many educators. It is this fact which is often forgotten in the spate of studies on preferred modality approaches, establishment of token economies or use of this or that perceptual programme.

It is a certainty that remedial programmes will continue to be needed in our system of education. For it would seem an established fact that the complicated nature of the individual precludes us from stating that an educational institution will be able to take care of the reading problems of *all* its children successfully. Therefore, the search will need to go on to find out what kind of treatment approaches will be most helpful. From this review it can be said that a variety of programmes warrant further investigation and use.

At the same time we need to understand that all too often the educational institution operates at less than maximum effectiveness. It has already been pointed out how the failure rate in American schools is too high. We have noted that some school personnel are inadequately trained, that the curriculum is inadequately organized, and that such conditions contribute to the development of reading disability in the school child.

If we provide no educational strategies or diagnostic or specialized services for helping children as previously outlined, we are asking the regular class teacher to try to be successful with too many children, without an adequate time period to do so, and without an adequate repertoire of skills at her command. Thus we can make a legitimate case for some supportive services.

In the future we will therefore need to look at increasing numbers of variables, some of which have been outlined here, in order to plan a valid programme of diagnosis and remediation and to work out a system where the incidence of reading retardation is kept at a minimum because of the preventive efforts which have been carried out.

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20 Cultural deprivation and reading

Asher Cashdan

The problem

Many of the children in our society never become effective readers. They are a much bigger group than those in 'remedial' departments and classes, even if one includes those on waiting lists. For remedial provision, even if children in special education are included in it, has never tried to cover more than 5 per cent or 6 per cent of the population, though educationists have often pointed out that we need to give help to 10 per cent or 15 per cent. The actual number of inadequate readers is probably something much more like 30 per cent, or even higher. At any rate, this would seem to follow from the claim being made in recent months that the United Kingdom has a staggering total of two million adult illiterates. It seems certain that many of these must, to use John Downing's term, be the 'exliterates' who did indeed learn to read at school, but have since lapsed. If that is the case, this can only reflect the shaky grasp on literacy which they achieved as school children.

Longitudinal researches are unanimous that this problem of low achievement is heavily located in the 'working class'; that is, in those families which are at the bottom of the league, whether measured by fathers' occupations, family income, parental educational level, or cultural background. Educationists have tended to concentrate on the last of these, partly on the grounds that the other factors are largely outside their control. Teachers have tried hard to remedy the language deficiencies they see in many such children, at broadening their 'restricted' codes and supplying them with the cultural enrichment which will make school success possible. Within this context, it has frequently been suggested by research workers (e.g. Jensen 1969) that many such children are genetically inferior, so that learning is not easy for them. But, to their credit, teachers have gone on trying; after all, their concern is with what *can* be done.

The challenge

The whole concept of cultural deprivation has been challenged recently, on a variety of fronts. William Labov (1972) has made careful analyses of the language of negro children in the United States. Nell Keddie, in this country, has been among those sociologists who have questioned the whole relationship between teacher, school and child (Keddie 1973). Rosen

(1972) has written a highly critical essay on the theories of Basil Bernstein, in the course of which he points out many of the ways in which the natural speech of working-class children may be positively preferable. All these workers unite in suggesting that the majority of the less successful children at school are not lacking in academic ability, but are socially alienated from the school system as it exists. Most schools have expectations of children which the children do not seem able to match up to. But the problem may be located in the school rather than in the pupil. Human beings adapt very quickly to what seems expected of them; so if the expectations are unnecessarily low, we may never know what a child's true potential and abilities are.

Some aspects of this argument are not all that new. In 1968, Elizabeth Goodacre showed that teachers often had quite wrong conceptions of their pupils' home backgrounds, derived very much at second hand. From another angle, Rosenthal and Jacobson (1968) found that teachers' expectations played a major role in pupil achievement. Although this study has since been criticised, its message cannot be wholly dismissed.

Essentially, the debate centres round the question of whether the children we are discussing simply have *different* backgrounds, experiences and ways of using language, rather than inferior ones. If this is so, it is important to be sensitive to the possibility that our most well-meaning efforts could be doing more harm than good. The very labelling of half the school population as 'Newsom' children, though meant to highlight their educational needs, could instead serve to lower our expectations of their educational potential.

Languages and logics

Benjamin Whorf, Stringer and others (1973) promulgated the thesis that the language we possess determines our conception of the world. If we speak a language in which a word, or a concept, is missing then we may have no way of appreciating it. Thus, one needs to speak French to get the full flavour of *sympathique*: the word 'sympathetic' in English is inadequate. Now Labov and others would agree that negro children speak a different 'language' from middle-class white children; similarly, though less obviously, there are differences between the way language is used in different social subgroups within our own country. The important question is whether these language differences denote a deficiency, or whether they are just acceptable variants, which teachers wrongly attempt to suppress. Certainly, most people now agree that the insistence that children speak (or even write) only in full sentences and with 'correct' grammar, is unnecessary and inhibiting. Instead, we have focussed upon the area opened up by Basil Bernstein (1971–4) and his claim that many working-class people speak a restricted, public, limited language code which is not adequate for the conceptual demands made upon the child at school. But it is beginning to be seen that this claim, though it does draw attention to some of the needs that language has to serve to be an adequate tool for abstract thinking, has rather run ahead of the evidence. For it is clear both that many middle-class speakers use restricted codes at times themselves and, though they do not always do so as readily, that working-class speakers can use elaborated language in the right circumstances. Furthermore, as Ginsburg (1971) among others has pointed out, we still have little evidence to show that working-class children's language is not adequate for their purposes. Finally, as Rosen argues fiercely, it really is extremely dangerous to talk about the population of the United Kingdom as if one could cut it into two distinct segments, the working-class and the middle-class. Swift (1968) has revealed in an empirical study what differing attitudes to life, occupational possibilities and education can be found within the working-class community.

Language and thought

How far is language so critical anyway? Eric Lunzer (1973) pointed out that there are dangers in overstressing the role of language in intellectual development. Furth (1966), too, in a series of ingenious experiments with deaf children has suggested that one cannot take it for granted that the development of thought depends wholly on language.

Perhaps the issue can best be understood in the context of the work of Marion Blank (1972). She has suggested, in working with disadvantaged children how much language can be used to support and extend abstract thought and has developed a fascinating teaching programme to help teachers in this field. But perhaps what the child lacks is not the language to sustain his thinking, but the control over his situation which would enable him to understand the power and the application of the language he already has.

Family processes

For all that, there can be no doubt that some children arrive at school better prepared than others. Hess and Shipman (1965) showed that mothers from different social backgrounds varied characteristically in the ways they spoke to their children. Their work is very much in accord with that of Bernstein and of Robinson (1972) who also showed that children fell very much into their mothers' language styles. In other words, the type of explanation the mother gave to her child was echoed in later years by the way the child himself answered questions. One of the most interesting distinctions which runs through all this work is that between the 'status' and the 'personal' level of description. In the former, explanations are in terms of formal position; for example, 'that's silly behaviour for a boy', or 'you're too old to behave like that'. On the other hand, personal explanations are in terms of the particular skills and characteristics of the individual, who is encouraged to see himself as having a distinct personality of his own. Hence the four year old who can tell visitors what he is good and bad at!

This is not to say that the ideal mother is the one who spends all her time with her child, offering him complex language and teaching him how to exploit his environment. Recent researches by White (1971) suggest that the ideal mother is one who provides her child with adequate opportunities, but is actually present only from time to time to act as consultant, with the occasional prod, advice, or piece of vocabulary. Similarly, Cazden (1972) suggests that small children may learn more from the presence of general language models (that is, from listening to a variety of adult language) than from deliberate language improvement 'lessons'.

Child-teacher behaviour

One thread which seems to run through all of these apparently somewhat disparate observations, is the need to work from the child's present position, to listen to him, to help him achieve his purposes. And there are other sources which support this suggestion. One example is the whole new movement in infant study, where it is constantly being discovered that even the newborn infant has far more developed skills than we used to give him credit for. By the time the child is two or three months old he does not simply respond but frequently initiates interactions (Trevarthen 1974). On the other hand, the classroom research of Barnes (1972), as well as some observations initiated by the present writer in nursery classes, indicate that many teachers spend far more time talking at children rather than listening to them. What we still have to disabuse ourselves of is the Lockeian idea of the child as a *tabula rasa* — a blank slate — on which we are to write. Rather must we see him as someone who has needs and interests to which we have to respond.

The answers are neither easy nor obvious. Making reading material 'acceptable' to children is often too facile an answer. This may explain why the highly acclaimed Nippers series has not been praised as much by children as by adults! True, reading material and situations should be appropriate and meaningful to the child in his own situation; but that is not necessarily to say that the slum child should have stories about the slums! He may want his own escapism too.

One of the problems is that society, in the shape of the teacher, decides what the child ought to learn without reference to him. As adults we know how valuable (and exciting) it can be to know how to read. But many children do not know this. In a more primitive society, it would be unnecessary to convince a child that he needed to learn how to hunt. In ours, there are no such easy ways out — and the risks are real. One need only point again to our two million illiterates to emphasize the fact that we are not always successful in convincing children that they need reading.

Some conclusions

More than one solution is available. The educationist could go on subordinating the needs of the many to the achievements of the few; though that is a prescription for revolution. Or he could drop the teaching of reading entirely; though few would accept that way out. What really must be done is to bring the pupil back more centrally into the learning situation. This means a language-experience approach to reading in the early stages, where one works from the child's needs and desires. It means also an approach to education which sees it as a continuous process, which neither starts nor stops at a precise age: an *éducation permanente* under the learner's own control. The logical consequence of this is that the learner would choose when to enter and leave the educational system, something for which we are probably not yet ready.

Above all, there needs to be an open debate — and perhaps a taking of sides — on the aims of the teacher. Education is a political issue and one cannot opt out, even in the day to day process of marking children's work. John Ezard in *The Guardian* for July 16th, 1974 reports a controversy on two children's essays which were used in a Schools Council Working Paper as examples of poor and good writing. Here are two very brief extracts:

> I was an honest man, never stole an never caused a row until i lost my job. I was a Farm Labourer getting a fair wage. I had worked at this place too over six years, i got on well with the boss and the rest of the workers.

> Elizabeth Shepherd had come from a simple, rather poor family; her father had been the vicar of the parish of Hornsey. From her childhood she had been a good girl, a pride to her family; but to herself she had been a failure, in looks, in talent and in wit.

One could hardly hope to get all teachers to agree as to which is the 'better' of these two. For some, the personal style and directness of the first writer far outweigh the 'literary' qualities of the second. Others consider the first passage immature and restricted. But it is certainly worth debating the issue. And in this writer's opinion, it is those who can listen to what a child has to say, in whatever style, who will find that their pupils go on reading and writing after school.

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21 Reading readiness — personal research

Derek Thackray

The writer became interested in reading readiness when his first daughter was approaching school age and beginning to enjoy looking at books and pointing out words she could recognize. An investigation of the literature on reading readiness indicated that there seemed to be a large number of abilities, skills, influences and interests which contributed to reading readiness. The writer felt that a long list of specific traits and influences that determine a child's readiness for reading was not particularly helpful to the busy teacher who is rightly more concerned to know *which* abilities and skills are the most important ones. His first research, therefore, was designed to establish which of the reading readiness abilities most frequently mentioned in the literature were the most important ones.

An investigation to establish the most important reading readiness factors (Thackray 1965)

A representative sample of 182 children from eleven schools were tested in a number of measures of reading readiness when starting their second term in school (average age 5 years 4 months). The following measures were used:

Reading readiness skills

The Harrison-Stroud Reading Readiness Profiles (anglicized by the writer) consisting of using symbols, making visual discriminations, using the context, making auditory discriminations and using context and auditory clues.

Mental ability

The Kelvin Measurement of Ability Test for Infants.

Teachers' ratings of general ability.

Home environment

A multiple-choice Picture Vocabulary Test constructed by the writer.

Teachers' ratings of language and speech.

Notes made by the writer on the socioeconomic background of the children's homes.

Emotional and personal attitudes
Class teachers' ratings of self-confidence, cooperation with adults, cooperation with other children, persistence, stability and prevailing attitude.

Two terms later, the same children (average age six years) were tested for reading achievement by the use of the Southgate Group Reading Test and the 'primer criterion'. The children were tested again with these measures at the beginning of their fifth term in school (average age 6 years 4 months) to examine reading progress.

Analysis of data

A study was made of the competency of the children tested on all the aspects of reading readiness.

The raw scores obtained from all the measures used were standardized, and all the earlier results from the readiness measures were correlated with the two later reading achievement results. The predictive value of the reading readiness tests and the relative importance of the various aspects of reading readiness were assessed by the degree of correlation between these two sets of scores.

A comparison was made between the performances of the boys and girls on both the reading readiness measures and the reading achievement tests.

The minimum mental age requirements for effective reading progress in the sample was investigated.

Results

The main results are summarized as follows: the frequency distribution of scores on the five tests of reading readiness skills, and also the measures of vocabulary, language and speech showed a wide range of individual performances. The mental age range was from 4.0 to 8.0 years. Teachers' ratings of emotional and personal attitudes tended to cluster round the average.

In this sample, the Harrison-Stroud Reading Readiness Profiles, as a whole, proved a valid measure of readiness for reading (0.59), and of these tests auditory (0.53) and visual discrimination (0.50) correlated the most highly with reading achievement; general ability (0.47) and home environment (0.42) were found to be important, but emotional and personal attitudes relatively unimportant (0.10–0.36).

The girls showed a significant superiority over the boys in two of the tests of reading readiness skills — auditory discrimination (1 per cent level) and using context and auditory clues (5 per cent level) — the common element being auditory discrimination. Also, in the Kelvin Measurement of Ability Test, the Vocabulary Profile and the two reading achievement tests the girls showed a significant superiority over the boys.

In the sample, a mental age of 5 years 6 months was found adequate for beginning to read and for making satisfactory progress in the early stages of reading.

The research described above was completed in 1964 when there was a good deal of interest in the initial teaching alphabet (ita). At that time all the descriptions of the differences between ita and the traditional orthography (TO) stressed that the former was more simple both in its visual and auditory characteristics; another claim for ita was that the problems to be solved in mastering it are of a simpler nature than those of TO.

The protagonists of ita suggested that because of the simpler approach to reading through the medium of ita, children were ready to read earlier than if they learned to read with the more complex TO. The writer, knowing the importance of visual and auditory discrimination and mental ability from his own first research, felt the claim was a reasonable one and decided to test this hypothesis experimentally in a second investigation.

An investigation into readiness for reading with ita and TO (Thackray 1971)

The method of approach was to enlist the cooperation of sixteen schools, eight schools where the children were learning to read with ita and eight schools, matched as well as well as possible with the ita schools, where children were learning to read with TO. Representative ita schools were chosen from the towns and from the villages, and from differing social backgrounds within towns; TO schools were selected to match the ita schools. Altogether there were approximately 120 children in each group.

The children in the experiment were studied over a three-year period (from September 1965 to July 1968) during which time the children learning to read with ita had transferred to TO. After being in school for approximately six weeks, all children were given tests to see to what extent they were ready to read — tests of intelligence, tests of vocabulary, tests to see if they could match shapes and words, tests to see if they could match sounds. The information gained from these tests enabled the matching of the two groups of ita and TO children on a number of important variables.

At the beginning of the children's third term in school, reading attainment tests were given to both groups of children. The usual form of the test was given to the TO group, but a transliterated version of the same test was given to the ita group. In this way initial progress in learning to read was assessed.

During the children's second and third years in school, the same reading attainment tests were given from time to time, but at the end of the second year it was possible to give the tests in TO to all children. Some of the children at this point had not transferred to TO so these results were not as valid as the results at the end of the children's third year in school when all but four of the ita children had transferred to TO.

Below is a summary of the testing programme described above:

First year	*Tests given and evaluations made*
1st term (Oct.–Nov. 1965)	Visual discrimination — Thackray Making visual discriminations in ita — Harrison-Stroud Making visual discriminations in TO — Harrison-Stroud Auditory discrimination — Thackray Making auditory discriminations — Harrison-Stroud Wechsler Intelligence Scale for Children (verbal tests only) Goodenough Draw-a-Man Test Vocabulary Profile — Thackray Fathers' occupations and notes on home backgrounds Reading readiness evaluations
3rd term (April–May 1966)	Visual discrimination — Thackray Auditory discrimination — Thackray Schonell Graded Word Reading Test (first time given in ita in experimental schools and in TO in control schools)
Second year	*Tests Given*
4th term (Sept.–Oct. 1966)	Schonell Graded Word Reading Test (second time given in ita in experimental schools and in TO in control schools) Neale Analysis of Reading Ability — Form A (first time given in ita in experimental schools and in TO in control schools)
6th term (April–May 1967)	Schonell Graded Word Reading Test (third time all children tested in TO but where ita children had not transferred they were tested also in ita) Neale Analysis of Reading Ability — Form B (second time all children tested in TO but where ita children had not transferred they were tested also in ita)
Third year	*Tests Given*
9th term (April–May 1968)	Schonell Graded Word Reading Test (fourth time all children tested in TO) Neale Analysis of Reading Ability — Form A (third time all children tested in TO)

NB Throughout the testing period teachers kept records of their children's progress through the basic books of the reading scheme.

Results

The main findings of the experiment were as follows:

1 Children were ready to read with ita about six months earlier than children learning to read with TO, suggesting experimentally that ita is a simpler medium than TO.
2 Children make much quicker progress when learning to read in ita than when learning to read in TO and this continues while they are reading in ita.
3 When ita children transferred to TO there was a slowing down in their progress, which enabled the TO group to catch up with the ita group, so that at the end of the second and third years in school, the average reading standards of both groups were the same.

From the writer's first two experiments it was becoming apparent to him that there are two important influences which affect the stage at which a child is ready for reading. The first influence is the skills and abilities the child brings to the reading situation; the second influence is the materials and methods used to teach a child to learn to read. This means that to help the child towards reading you can concentrate on fitting the child for reading by developing in him the necessary skills and abilities required for learning to read successfully; or you can concentrate on fitting reading to the child by using simpler approaches with which he can cope more easily. As teachers have professional autonomy regarding the materials and methods they use, the writer felt that to concentrate his energies in the area of fitting the child for reading would be of more value to teachers in helping them to develop reading readiness in their children. Before the teacher can develop the necessary reading readiness skills and abilities she must first assess the skills and abilities her children bring to the reading situation, and so the writer decided, with the help of his wife, to design and standardize reading readiness tests for reception classes.

Thackray Reading Readiness Profiles (Thackray and Thackray 1974)

The Profiles are the first original British reading readiness tests to be published and are the outcome of many years of research in the field of reading readiness with British children on the part of the authors. The standardization of these tests was made possible by a three-year research grant to the authors from the Social Science Research Council.

The *Thackray Reading Readiness Profiles* are group tests designed for use with reception-class children soon after they enter school. They provide the busy teacher with a quick, convenient and reliable measure of the most important reading readiness measures. The four vital measures of vocabulary development, auditory discrimination, visual discrimination and general ability are measured directly in four short subtests which each take approximately twenty minutes to administer. But in order to complete these four tests satisfactorily, a child must pay attention and follow directions, and examine the pictures and words in a left to right sequence so these abilities are also measured in the Profiles. The standardization was carried out with a population of 5,500 children, from urban and rural areas, differing home backgrounds, and from England, Wales, Scotland and Northern Ireland. The raw scores obtained for each test are converted by means of the table in the manual to a grade on a five-point scale (A, B, C, D and E) relating each child's score to that of the population of five year old children just starting school. The results indicate those children who are strong in all the reading readiness measures and who could learn to read with success at once, and also those children who are weak in all the measures and who must not be hurried into learning to read. However, for the majority of children the Profiles aim to be diagnostic and to provide the teacher with valuable information about her children's reading readiness abilities.

Once the teacher knows her children's strengths and weaknesses in these vital reading readiness skills and abilities, she can then take positive steps to develop the necessary skills in her children through the provision of a stimulating programme of prereading activities. The manual contains a number of suggestions to the teacher for developing language skills and the perceptual skills of visual and auditory discrimination.

For the future, it is planned to use these Profiles firstly to gain further evidence of their predictive ability and secondly to establish threshold requirements for learning to read successfully in each of the important reading readiness areas measured.

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22 A second survey of reading tests used in schools

A. Nicholls

Schools allocated for teaching practice to Teesside College of Education were circularized with a simple questionnaire which headteachers were asked to complete to give information on which reading tests were being used within the schools. A survey had been carried out some three years previously (1971) and it was hoped that some comparison would be possible in order to see if there was any significant change in the use of tests. In both cases the survey was restricted to infant, junior and primary schools; the questionnaire used was almost identical in format, the only exception being that in the first survey no specific tests were listed, whilst in the second survey a list of tests was incorporated within the questionnaire. This was done in order to facilitate completion of the questionnaire, and the tests listed were those found to be in use in the schools as a result of the first survey. Throughout this report the statistics of the previous survey are shown in parentheses in the various tables. Table 1 on page 184 shows the response from schools. The information gained from the replies is set out in the succeeding paragraphs. The number and type of schools using published reading tests is set out in Table 2 on page 185.

In the case of infant schools, those schools not using published tests generally indicated that the assessment of reading standards was carried out by the headmistress. The method of assessment was to listen to each child reading. The reading material usually appeared to be the child's reader. One school specifically asked for information on published tests which could be considered suitable for the infant age range and they were advised accordingly. The same situation had arisen in the previous year and in that instance the school concerned is now using a published test, apparently with success, although the test used does not appear to be used to its full potential.

Tables 3A, 3B, 3C (see pages 186–187) list the titles of published tests used by the schools.

Table 1

	Infant schools		*Junior schools*		*Primary schools*		*All schools*	
	1973	(71)	1973	(71)	1973	(71)	1973	(71)
Questionnaires despatched	42	(41)	34	(31)	19	(18)	95	(90)
Replies received	23	(22)	26	(20)	14	(9)	63	(51)
Percentage of replies	55%	(53%)	76.5%	(64%)	73·7%	(50%)	66%	(57%)

Table 2

	Infant schools		*Junior schools*		*Primary schools*		*All schools*	
Questionnaires despatched	42		34		19		95	
Replies received	23		26		14		63	
No. schools using published tests	11	(7)	25	(20)	13	(9)	49	(36)
Percentage schools using published tests	48%	(32%)	96%	(100%)	93%	(100%)	78%	(70.5%)

(Percentages are expressed in relation to replies received and not to the number of questionnaires despatched.)

Table 3A (All schools using published tests)

	Infant schools	*Junior schools*	*Primary schools*	*All schools*	
Schonell	7	21	10	38	(28)
Holborn	3	15	4	22	(13)
Burt	3	5	7	15	(15)

Other tests as per table 3B

Table 3B (Schools where more than one test is used)

	Infant schools		*Junior schools*		*Primary schools*		*All schools*	
Schonell	2	(1)	16	(12)	8	(6)	26	(19)
Holborn Reading Test	3		15	(8)	3	(4)	21	(12)
Burt Graded (rearranged) Word Reading Test			3	(10)	7	(3)	10	(13)
Daniels-Diack	1		4	(2)	2	(2)	7	(4)
Neale Analysis of Reading	—	(1)	3	(1)	—	(2)	3	(4)
NFER Sentence Reading Test	1	(1)	1	(3)	1		3	(3)
Southgate Group Reading Test	1	(1)	1	(1)	1		3	(2)
Others	—		2	(5)	4		6	(5)

Table 3C (Schools where only one test is used)

	Infant schools		*Junior schools*		*Primary schools*		*All schools*	
Schonell	5	(4)	5	(3)	2	(2)	12	(9)
Burt	3	(1)	2	(1)	—		5	(2)
Holborn	—		—	(1)	1	(—)	1	(1)
	8	(5)	7	(2)	3	(2)	18	(12)

Note to Tables 3A, B and C

The criterion used for schools using one test, or more than one test, was that where the school used one test only, or one particular test battery, e.g. Schonell's various tests or Daniel's and Diack's *Standard Reading Tests*, they were deemed to be using one published test. Where the school was using tests published by more than one author they were deemed to use more than one test.

Schools were not required to express any preference in the use of any test and the tables only showed whether the test was used or not. In several cases, over both surveys, some tests were reported as being 'used occasionally' or used 'only when necessary'. It may be misleading, therefore, to presume that headteachers place the greatest reliance on the test which appears to be mentioned most frequently. Factors such as convenience, ease of application, ease of scoring, teacher preference, are all relevant considerations which did not come within the scope of this enquiry or of the previous enquiry.

The frequency of testing is set out in Table 4. The figures refer to all schools reporting the use of published tests. Those schools listed under 'combination' operate frequencies not falling in the groupings shown, e.g. a school testing annually and additionally on leaving the school, or admission to the school.

In addition to the frequency of testing outlined in Table 4, several schools reported additionally testing 'in cases where reading difficulty was identified' or for purposes of diagnosis, whilst many schools reported additional testing 'of remedial groups'. Infant schools reported the testing as 'being at the request of the junior department' in some cases and generally inferred that published tests were of limited assistance, and were primarily used as an objective attempt to confirm the assessment they made in hearing children read.

Schools were asked to indicate the nature of the tests used under three main headings, i.e. diagnostic, attainment, or both. The replies are summarized in Table 5 on page 189.

The value of this section of the return is very doubtful due to the nature of the replies and the absence of specific detail of the tests used. This feature was experienced in the first survey and remains preeminent. Nevertheless the item was retained in the survey in order to identify any particular trend that may have presented itself. In drawing up the questionnaire this feature was carefully considered and it was felt that any attempt to refine this section of the survey would reduce the number of returns that might be expected. It was therefore decided to retain a simple section and accept the limited information that it produced.

It is apparent that a high proportion of tests used are purely for the assessment of attainment. Where tests have been described as diagnostic, it is not clear what form of diagnosis was being sought, other than an inability to recognize words or a straightforward recognition of reading failure. This only recognizes diagnosis of a very generalized nature. In

Table 4

	Infant schools		Junior schools		Primary		All schools	
On admission			1	(1)			1	(1)
Each term			1	(1)	1	(1)	2	(2)
Biannually	1	(1)	8	(4)		(3)	9	(8)
Annually	1	(1)	11	(13)	9	(4)	21	(18)
On leaving	8	(5)		(1)	1		9	(6)
Combination	1		4		2		7	
	11	(7)	25	(20)	13	(8)	49	(35)

Table 5

	Infant schools		Junior schools		Primary schools		All schools	
Diagnostic	2	(1)			1		3	(1)
Attainment	7	(5)	16	(11)	7	(4)	30	(20)
Both			5	(7)	2	(3)	7	(10)
Undetermined	2	(1)	4	(2)	3	(2)	9	(5)
	11	(7)	25	(20)	13	(9)	49	(36)

several cases, however, there has emerged comment which indicates the use of tests which do offer diagnosis of specific disabilities, e.g. the use of the Neale Analysis (but unfortunately in one instance the Neale Analysis is described as an attainment test). Undoubtedly it may be argued that the Neale Analysis does, in fact, identify a degree of attainment. It is felt, however, that it is an expensive test in terms of time if it is used only for this purpose. In general the answers received create an impression that tests are operated, in some instances, without full consideration of the scope which they offer. In other instances it appears that the test may not be fulfilling the purpose for which it is used.

In conclusion the primary purpose of the survey has been fulfilled, in that the present information on the use of tests in schools is confirmed. The percentage of replies received from schools has increased from 57 per cent of all schools circularized in 1971 to 66 per cent of schools circularized in 1974. Additionally the sample size has increased slightly. The number of returns from schools may indicate an increasing awareness of the use of tests, whilst the replies themselves show an increase in the number of schools using published test materials. The increase, however, cannot be described as startling.

Other factors which arise from scrutiny of the returns are briefly as follows:

1 In primary and junior schools over 70 per cent of schools use more than one published test, as opposed to some 27 per cent of infant schools using such tests. On the other hand over 50 per cent of infant schools do not use published tests of reading at all, but rely on the subjective testing carried out by the headmistress in conjunction with class teachers. Undoubtedly such a test situation, carried out by an experienced teacher, is perfectly valid and should not be underestimated. The teacher, however, must be experienced if this form of test is to be reliable or valid.

2 The Schonell Word Recognition Test remains the test used in most schools, although many schools are using other tests in addition. The Schonell, Burt and Holborn word recognition tests, however, are the only tests used in isolation from other tests.

3 There remains a high proportion of testing which is carried out purely as attainment testing. It is true that diagnostic testing is more time consuming, but in view of successive reports, articles and so forth, all complaining of reputedly lower standards of reading ability, one would expect to see more evidence of diagnostic testing.

4 The pattern of test frequency, where testing in over 60 per cent of schools is carried out as a terminal practice in the infant school and an annual practice in the junior or primary school, may merit review. Is the testing becoming a ritual with little value other than that of completing a record card?

This report has been confined to an overall view of tests in use in specific schools. The concluding remarks have similarly been kept to a few major points for observation and possible discussion. There remain many inferences implicit in the material of the report which will not be developed here. Finally the college and the author would like to acknowledge the cooperation of the schools who submitted completed questionnaires.

23 The Illinois Test of Psycholinguistic Abilities in the diagnosis and remediation of reading failure

Peter D. Pumfrey

Introduction

This paper is concerned with the use of diagnostic testing as a guide to educational prescription. It is focussed on that large number of first-year junior school children who are considered to be at educational risk because of their poor progress in reading.

The reading of the eight year old differs qualitatively from that of the fifteen year old. That of the competent eight year old reader also differs in many ways from a child of the same age who has difficulty in reading. The use of diagnostic tests is one way in which our assumptions concerning the nature of reading can be made public, their validity examined, and our understanding of and control over the development of reading abilities advanced.

Despite our incomplete understanding of the nature of the reading process, teachers know a great deal about the conditions that facilitate children's acquisition of reading competence. There is no one method that suits all children equally. Many equally valid paths lead to the conquest of the skills of literacy. It can be argued that every child should learn to read by a method suited to his particular abilities. Yet in the interests of efficient instruction, teachers are continually searching for methods that will be effective with more than one child. On occasion this search may have some partial success. However, when any single approach found valuable for a particular group of children is claimed as a panacea for the reading difficulties of all children, the teacher rightly shows scepticism.

Aptitude × instruction interactions

Jensen (1970) has usefully commented on the preceding point. He argues that efficient education demands that we identify aptitude × instruction interactions (hereafter AIIs). Thus a particular method works for groups with specific characteristics, enabling children to achieve a prescribed objective efficiently. One aim of the teacher of reading is to establish which methods most effectively help which children to achieve a given reading skill in a prescribed situation.

When children start school the extent of their vocabulary and the complexity of their language is sometimes underestimated by teachers. Yet it is this important language base on which the skills of reading are developed. The typical five year old will understand orally-presented aurally-received problems but would find great difficulty with the same problem presented in print. Smith (1973) has argued that children learn to read because they are, in essence, symbol-manipulating information-processors. Thus, within our educational system, most children learn to read almost irrespective of the instruction to which they are subject. On the other hand, it can be claimed that effective reading is so complex a network of skills that it is possible for children to learn strategies that are inefficient and self-defeating. The teacher's aim is to minimize the difficulties and to optimize the chances of effective reading. It is a continuing search for AIIs.

Teachers' opinions: a step towards identifying AIIs

Some evidence prepared for submission to the Bullock Committee by the UKRA included an analysis of 188 teachers' responses to an inquiry into three related questions (Thackray and Markham 1973). The questions were:

1 In your experience what are the main difficulties children have in learning to read?
2 What are the main difficulties you have found in teaching children to read?
3 In what areas in the teaching of reading would you welcome help and advice?

Because they showed a high degree of overlap, the responses to the first two questions were grouped into eighteen categories and their rank order of importance determined. The original tables have been rearranged and edited for the purposes of this paper. The first seven difficulties listed in reply to the first question are given in Table 1.

Table 1 Major areas in which children have difficulty in learning to read as seen by 188 teachers

Rank order	*% agreeing*	*Difficulty*
1	44	Difficulties associated with language and speech.
2	32	Problems of auditory discrimination.
3	31	Difficulties in mastering phonic stages.
4	30	Difficulties in visual discrimination.
5	23	Problems associated with memory span.
6	16	Unhelpful parental attitudes.
7	16	Lack of experience in the home.

The overlap indicated in the above percentages underlines the great variety of ways in which this group of teachers viewed the constellation of variables that adversely affect children's progress in reading.

Turning to the four main difficulties found when teaching children to read, their rank order was seen as follows in Table 2.

Table 2 Main difficulties found by 188 teachers in the teaching of reading

Rank order	*% agreeing*	*Difficulty*
1	53	Difficulty in giving individual help.
2	23	Lack of suitable materials.
3	17	Restricted language (of child).
4	16	Lack of motivation (in child).

In Table 3 the rank order of those aspects of the teaching of reading in which teachers would welcome help and advice is given.

Table 3 Major areas in which teachers would like help and advice concerning the teaching of reading

Rank order	*% agreeing*	*Help required*
1	23	Advice on teaching the slow learner.
2	17	The need for help in the classroom.
3	14	Need for specific material.
4	12	Advice on suitable activities.
5	12	Advice on diagnosing difficulties.
12	6	Advice on language and speech.

The preceding three tables suggest that there is some inconsistency between the causes of difficulties in the learning and teaching of reading and the steps likely to alleviate these problems. The tables also exemplify the difficulty in stating precisely the nature of children's and teachers' difficulties in the learning and teaching of reading respectively in such a broad type of survey.

If we are to identify aids likely to help poor readers in the first junior classes, we need to analyse the relationship between the language skills and reading attainments of typical eight year old children. We can then see more clearly how competent readers differ from those children who find difficulties. Such information can lead to promising suggestions for remedial work. However, greater precision than the information contained in Tables 1 to 3 is required. We must use diagnostic tests to help us in our task (Pumfrey, in press).

The Illinois Test of Psycholinguistic Abilities

At Manchester University we have been investigating the relationship between language development and reading skills in first year juniors. One of the instruments used in this work is the Illinois Test of Psycholinguistic Abilities (hereafter ITPA). It was originally conceived as a comprehensive diagnostic test for the assessment of language development. The model on which the test is based attempts to interrelate the processes involved when an individual receives and interprets or transmits a message.

The revised edition of the ITPA is one of the more comprehensive tests of children's psycholinguistic abilities currently available. The normative data in the manual enables one to convert a child's raw score into both psycholinguistic age equivalents and scaled scores. Additionally, the results are recorded as a profile enabling intraindividual differences to be described and educational prescription inferred. Although children with marked sensory or physical handicaps were excluded from the standardization of the test, the instrument has stimulated research into its value as a test of differential diagnosis with groups of variously handicapped children. Of these, those most pertinent to this paper are concerned with children having reading disabilities (Kirk and Kirk 1972).

Recent experimental work

In this section reference will be made to three recent pieces of work carried out by two of my students at Manchester.

One section of the first study investigated some relationship between psycholinguistic abilities and children's reading attainments in a group of 152 typical first year juniors. The aim was to use the ITPA plus other tests of language abilities to study these relationships (Westwood 1973). We can consider measures of language abilities as predictors of children's reading attainments. Techniques are available enabling us to establish the relative importance of any of a set of predictors in accounting for the variance in any criterion (Veldman 1967). In the present instance, the battery of predictor variables included the twelve subtests of the ITPA plus the English Picture Vocabulary Test 2 (Brimer and Dunn 1962), Auditory Discrimination Test (Wepman 1958) and a Sentence Repetition Test (Westwood 1973). Thus we have a total of fifteen psycholinguistic predictors. One part of Westwood's study looked at the relative importance of these in relation to differences in reading attainments. Reading attainments were measured on the individually-administered Graded Word Reading Test R1 (Schonell 1960) and the Group Reading Test (Young 1968). Predictors and criteria are shown in Table 4 on page 196.

In Table 5 the rank order of importance of the fifteen predictors is given. Each rank continues down to the point at which the addition of any other single predictor does not significantly increase the combined predictive power of the preceding group.

Table 4 Predictors and criteria of reading attainment used in a study of 152 first-year junior school children

Predictors	*Criteria*	
1 Auditory reception	Group Reading Test (Young 1968)	Graded Word Reading Test R1 (Schonell 1960)
2 Auditory association		
3 Verbal expression		
4 Auditory sequential memory		
5 Grammatic closure		
6 Auditory closure		
7 Phoneme blending		
8 Visual reception		
9 Visual association		
10 Manual expression		
11 Visual closure		
*12 Visual sequential memory		
13 English Picture Vocabulary Test 2		
14 Auditory Discrimination Test		
15 Sentence repetition test		

(Adapted from Westwood 1973, p. 107a)
*Predictors 1 to 12 are the subtests of the ITPA.

Table 5 Contribution of predictors to criterion variance

Criterion 1 Group Reading Test (Young 1968)	R^2	*Criterion 2* Graded Word Reading Test R1 (Schonell 1960)	R^2
1 Grammatic closure	0.34	English Picture Vocabulary Test 2	0.30
2 English Picture Vocabulary Test 2	0.43	Auditory closure	0.40
3 Auditory sequential memory	0.47	Visual sequential memory	0.43
4 Auditory closure	0.49	Visual closure	0.46
5 Visual sequential memory	0.51	Auditory sequential memory	0.49

None of the other individual predictors added significantly to the multiple correlation with either criteria.
(Adapted from Westwood 1973, pp. 143–144)

There is need for great caution in interpreting the results of this type of analysis. It does not necessarily follow that the rank order of importance given above is constant. It could change from sample to sample of children. It could also change depending upon the variables put in the predictor battery and, as we see above, on the nature of the criterion. Nonetheless, the above analysis indicates that high performance on the above language tasks is correlated with relatively high reading attainment and *vice versa*. Thus we might expect to find failing readers in the first year of the junior school showing significant weaknesses, compared with their year group, in certain of the psycholinguistic functions shown in Table 5.

These findings are a rather narrower but more explicit statement of the types of abilities important in the learning and teaching of reading as outlined by teachers in Tables 1 and 2. Such a descriptive investigation can give clues to educational treatment. If particular deficient language skills can be improved, it is not unreasonable to expect that the child's likelihood of coping more adequately with reading will also increase.

The second research focussed on assessing the extent to which eight year old failing readers showed characteristic psycholinguistic deficiencies (Naylor 1972). One large urban LEA has a system whereby headteachers of infant schools or departments are asked to list all children who, at the age of transfer to the junior department, have poor reading attainments. Poor reading attainment is initially defined using a reader criterion. In this instance, it means any child unable to read fluently and with understanding Book 2 of one of the standard graded reading schemes. Returns for the year in question indicate that 1,039 children, about 10 per cent of the age group, were listed as at educational risk because of poor reading.

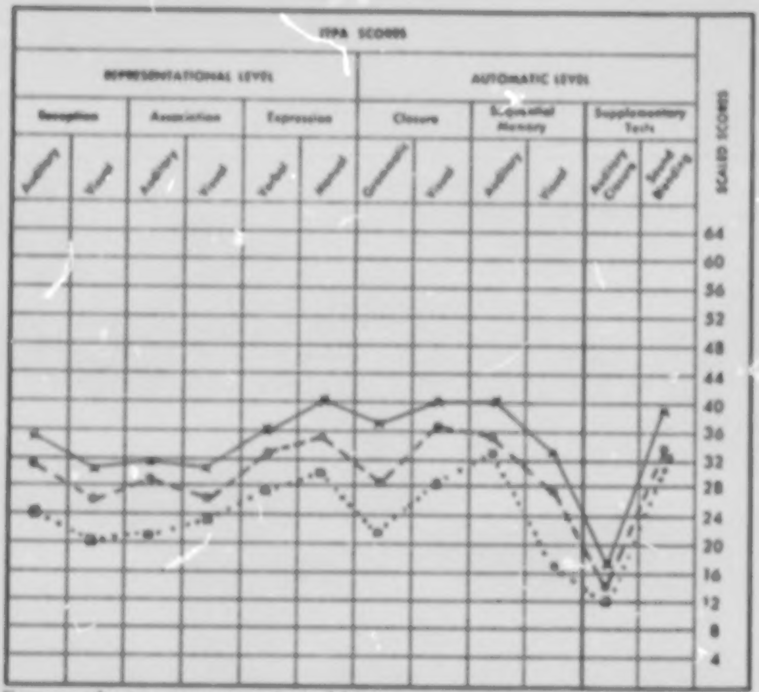
151 of these children from sixteen schools were identified. A random sample of forty-eight, stratified by intelligence and sex, was selected and tested on the ITPA. A pattern of psycholinguistic abilities diverging markedly from the standardization sample was found. This pattern held generally across intelligence and is shown in Figure 1 on page 198.

Although some significant sex differences were found, the patterns of both boys and girls showed a marked similarity. The findings were in general agreement with those reported by other workers in this field (Kirk *et al* 1972, Kirk and Stiefel 1972).

Now came the need for specifying some teaching procedures based on the diagnostic information of the ITPA. Kirk has consistently advocated the importance of remedying deficits in psycholinguistic abilities rather than solely building on strengths. He asserts that psycholinguistic disabilities can be alleviated. Skills can be taught. He argues that deficits that are neurologically related often become exaggerated because of avoidance, but can be alleviated by structured remedial activities.

This led to the third study (Naylor 1973). Having identified a group of poor readers with distinctive psycholinguistic characteristics, the next step was to design two theoretically-related treatments and evaluate their short- and long-term effects on the children's psycholinguistic abilities

Figure 1 Profile of scaled scores of poor readers of three different ability levels



Key —— above average intelligence ---- average intelligence ····· below average intelligence (Naylor 1972, p. 136) and reading attainments. The study was planned as a three stage investigation. In stage 1 a further group of sixty children identified as at educational risk because of poor reading was located. As would be expected, the group had a composite psycholinguistic age of 70.8 months, twenty months below their chronological age. Their mean IQ was 96.5 with a standard deviation of 9.97 on Raven's Coloured Progressive Matrices (Raven 1956). Their reading standards were very poor (see Table 6). The pattern of psycholinguistic abilities was found to be almost identical to that of the forty-eight children tested the previous year (see Figure 2 over). It was noted that the areas of greatest deficiency in these poor readers included some of the aspects of psycholinguistic ability highly related to reading attainment in the Westwood study.

In the profile for the group of sixty poor readers, the two functions that are significantly below those of the rest are auditory closure and visual sequential memory.

Stage 2 involved the specification of two intervention programmes. The first, known as the Kirk Group, comprised twenty-four activities intended to alleviate the deficits in the areas of auditory closure and visual sequential memory. In other words, the intention was to remedy specific deficits in psycholinguistic function. Twenty-four children were in this group.

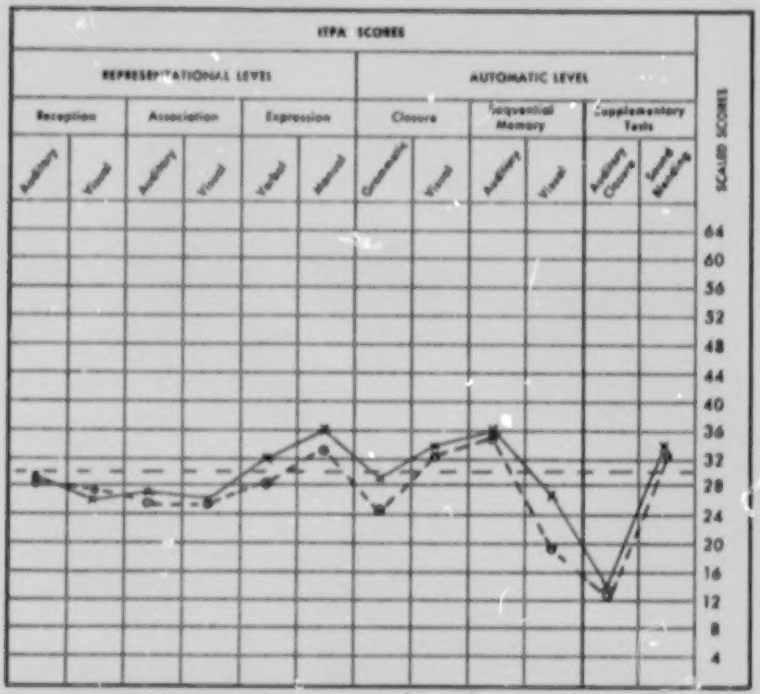
The second treatment group of twenty-four children received twenty-four lessons taken from the Peabody Language Development Kit, Level 2 (hereafter PDLK) (Dunn and Smith 1966). The PDLK stresses overall language competence rather than training in deficient functions. This group is referred to hereafter as the Peabody Group.

It is important to note that the PDLK is partially based on Osgood's model of the communication process, as is the rationale behind the Kirk approach. In effect, specificity of teaching is being contrasted with the effectiveness of a more general approach to groups with similar psycholinguistic deficits.

A third group of twelve children which acted as a control group was presented with a number programme comprised of simple exercises. It was designed to offset the Hawthorne effect. All treatments were given in groups of no more than six pupils. The three groups received their respective programmes for twelve weeks. An immediate post-test was carried out at the end of the treatment. The tests used were the ITPA and three reading tests. Some three months later a further testing of the children was carried out.

The results showed clearly that both the groups given systematic instruction made significantly greater gains in composite psycholinguistic age and on certain ITPA subtests than did the control group. Generally, the Kirk group did better than the Peabody group on the criterion tests. Yet the most striking difference between the profiles is the change in *pattern* of the psycholinguistic abilities of the group subject to the Kirk treatment. Its profile changed to approximate the pattern of the standardization sample. In contrast, the Peabody group, whilst showing significant improvements over the control group, still retained the original pattern of disabilities. Three months later these distinctions still held. The distinctive differences in profiles at the end of the experiment are shown in Figure 3 (opposite).

Figure 2 **Comparison of psycholinguistic profiles of two groups drawn from the same population in successive years**

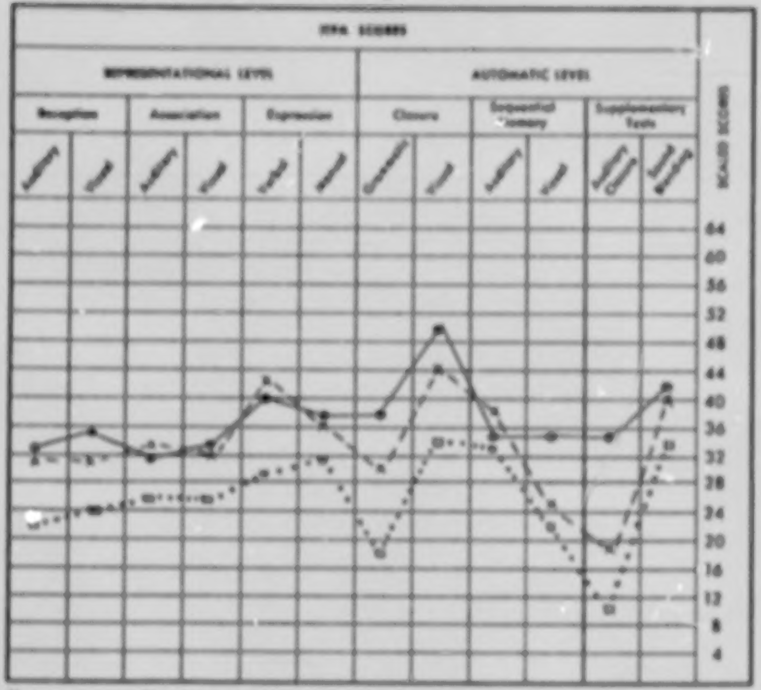


Key —— Group tested in 1971 (N=48)

●- - -● Group tested in 1972 (N=60)

(Naylor 1973,p.185)

Figure 3 ITPA profiles showing mean scaled scores for the three groups at the end of the experiment



Key ——— Kirk Group - - - - Peabody Group.... Control Group

(Naylor 1973,p.252)

It can be argued that changes in the scores of the groups on the ITPA subtests are no more than a reflection on the teaching of those subtests. An examination of the remedial programmes used by Naylor shows that this is unlikely to be the case.

Because we are interested in the possible transfer from language training to reading attainments, we must now turn to the progress made by the three groups in terms of their scores on reading tests. The results of three reading tests given to the three groups on three occasions are given in Table 6.

In the twelve weeks covered from C1 to C2, one could hardly expect a more marked improvement in the reading test scores of the two groups receiving structured teaching in comparison with the control group. The transfer was, in part, attributable to the content of the Kirk and Peabody group activities. The content of these was based on an analysis of the relationship between language and reading skills although it must be

Table 6 Reading ages on three occasions for the three groups

	Mean and SD	*Burt-Vernon* C1	C2	C3	Total Gain	*Carver* C1	C2	C3	Total Gain	*Southgate* C1	C2	C3	Total Gain
Kirk	X	5.1	6.5	6.8	1.7	5.1	6.3	6.7	1.6	6.6	7.0	7.1	0.5
Group	σ	0.63	0.65	0.72		0.91	1.10	1.04		0.29	0.38	0.24	
Peabody	X	4.5	5.8	6.1	1.6	4.6	5.5	5.8	1.5	6.5	6.7	6.8	0.3
Group	σ	0.34	0.63	0.72		0.73	0.78	0.91		0.27	0.25	0.32	
Control	X	4.6	4.8	4.9	0.3	4.3	4.8	4.8	0.5	6.2	6.4	6.4	0.2
Group	σ	0.68	0.77	0.86		0.50	0.99	1.17		0.41	0.30	0.40	

stressed that at no stage was any direct teaching of reading given. The differences noted continued until the follow-up testing. However, the difference between the Kirk and the Peabody groups are not significant on any of the three reading tests.

A side effect of importance to teachers is that the school attendance of the groups receiving structured teaching in language skills and experiencing success, increased significantly; that of the control group did not.

The frequently found short-term gains in reading test scores following the remedial teaching of reading indicate that caution must be exercised in interpreting the above findings. The important difference between this experiment and others is that here no direct teaching of reading was undertaken at all; the emphasis was on psycholinguistic skills. However, the beneficial effects on either these abilities or reading cannot be expected to continue without further instruction. As has been said elsewhere, teachers must provide for these children '. . . a far more continuous programme of remedial treatment as an integral part of their normal school activities if they are to enter secondary education as literate children' (Cashdan and Pumfrey 1972).

The attraction of the work outlined in this paper is that it attempts to be specific about the psycholinguistic foundations of children's reading failure. It shows that the prescription of effective treatment is possible and can be generalized to other related skills and attitudes. The role of diagnostic testing in the identification of AIIs in reading is given further support.

Conclusion

The ITPA has many weaknesses. Despite these, it enables us to detect characteristic psycholinguistic deficits of groups of first year junior schoolchildren at educational risk because of poor reading. The analysis also suggests methods of treatment.

Kirk's belief in the possibility of alleviating psycholinguistic deficits is given support. The possibility of improving reading attainment is also indicated. It is tentatively suggested that an AII of some practical significance to the class teacher has been identified, although further refinement is essential.

Whilst the limited evidence presented does not imply that the results will generalize to other teachers with children showing similar initial psycholinguistic deficiencies and reading failure, the hypothesis that they *may* merits attention.

Fuller accounts of the preceding experiments are in preparation. A long-term follow-up of Naylor's work is near completion. Further more extensive studies are planned.

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24 An experimental approach to the study and remediation of reading difficulties

Patrick John Macdonald

Basic orientation

This paper presents a personal view of the psychologist's role in the diagnosis of reading difficulties. The argument rests upon two basic assumptions. First, the psychologist is defined as a behavioural scientist. This means that he is a person who is trained to look at behaviour objectively and to evaluate it by methods which are scientific. In other words, his findings should be replicable and the interpretations of his findings should obey the rules of logic.

The second assumption that follows from this concerns the area of interest of the psychologist. In the field of reading difficulties he should be concerned with providing a scientific answer to the question 'Why has this particular child failed to acquire the skills of reading?'

What is a scientific diagnosis?

If one attempts to answer the question 'Why has this particular child failed to acquire the skills of reading?' in a truly scientific manner one meets formidable difficulties. The literature abounds with features which are associated with reading difficulties (Vernon 1957, 1962, 1971, Malmquist 1958). The general trend of research findings is that many undesirable characteristics are more prevalent in groups of poor readers than in groups of good readers. What has not been shown is the combination effect of several adverse characteristics in one individual.

Because of this and also the crude measuring characteristics of standardized tests one can never reach a scientific diagnosis purely on a combination of clinic interviews, teachers remarks and so-called diagnostic tests. The most that can be achieved by these methods is a tentative explanation which is based on general experience and probabilistic statements from test findings, e.g. this child has visual memory difficulties which are impeding his acquisition of reading.

A note of caution should be added here about possible confusion of cause and effect. There is certainly evidence to show that visual orientation and memory are developing rapidly at about the same time as reading instruction is normally begun (Vernon 1957). If one accepts this argument, one line of remedial action would be to train this particular child's visual memory in the first instance and leave any formal instruction in reading until this had improved. It would then be logical to assume that learning to read would be easier. If, on the other hand, one regarded good visual memory as the important skill to be achieved, one could argue that if we taught the child to read this would improve his visual memory. It is logical to assume that good visual memory is necessary for word recognition and that learning to recognize words trains visual memory — these features covary rather than one causing the other.

To return to the question of tentative explanations, one is confronted with the possibility of generating testable hypotheses. In the example above one could hypothesise that as the child has visual memory difficulties he will learn to read more rapidly when presented with a phonic approach than with a look and say approach. One can then test this hypothesis with a fairly simple laboratory-type experiment.

A scientific diagnosis is achieved when hypotheses derived from the tentative explanations have been tested and learning difficulties and facilities have been shown to occur in properly controlled learning situations.

How should the psychologist investigate learning problems?

There would appear to be two basic methods of approaching the investigation of a learning difficulty:

1 to investigate everything that is known to be related to learning difficulties
2 to weigh the evidence provided by people who know the child, e.g. parents and teachers, advance explanations from this evidence and then examine these explanations with standardized tests and controlled experiments as necessary.

The first method assumes the use of a standard battery of tests and related techniques and a series of minimal levels on the various functions assessed at which the function is rejected as being irrelevant to the learning difficulty.

The author prefers the second approach for a number of reasons. At a practical level it is probably a waste of time to test for a large number of factors which are going to be normal, for example thoroughly testing hand dominance in every instance because there is a relationship between handedness and reading difficulties. There is also the fact that the number of possible features to assess will continue to expand as more research is carried out relating to learning difficulties.

From the child's (and the examiner's) point of view such 'test bashing' may well prove so fatiguing as to interfere with the interpersonal relationship between the child and the examiner and thus obscure accurate findings. Most important, however, is an ethical point of view. The author regards it as tantamount to assault to give any psychological test to a child unless one has a definite hypothesis connecting the test result with the unique behaviour of that particular child.

To summarize, therefore, what is being advocated is an observation-intuition experiment approach and this will be illustrated below with three case studies.

Case studies

A case of book phobia

The subject in this case was a thirteen year old boy. He was referred for assessment as he was almost completely unable to read despite the fact that he was thought to be of normal intelligence and had received remedial teaching, along with others who had improved, since his entry to secondary school. Psychometrically he was in fact average with no discrepancy between verbal and nonverbal measures. He read at the six to six and a half year level on a variety of 'word barking' tests. There was nothing to suggest perceptual or memory difficulties and little evidence of emotional problems from his history, his behaviour in school or his responses to a variety of personality measures.

It was decided to see him regularly for clinic-based individual remedial teaching in the hope that this would reveal exactly where he was failing. He attended on about a dozen occasions where he was subjected to a predominantly look and say approach to reading, coupled with written comprehension exercises. He staggered through the work but did not appear to be improving yet he still gave no evidence of a specific difficulty.

Then, by accident, his books were forgotten for one session and the experimenter frantically wrote out some material in biro on scrap paper for about ten minutes before his arrival. He performed very well. The following session he returned to his books and made a sluggish response. Intuition suggested writing out his book on scrap paper — he performed well.

This phenomenon was then worked into a hypothesis that the problem was not strictly a reading problem but one of book phobia. This could be explained in terms of his early history when he was humiliated in front of his class early in his junior school days for not knowing a word in his book. He had cried at this humiliation for which his teacher had sent him 'to join the babies' in the reception class.

If it was a phobia one would predict that there would be a gradient of reading disability ranging from optimum performance on separate biro-written sheets of paper through worsening performance as the materials approached a book in appearance. This was tested using his present reading book as the basis for the material and measuring performance in terms of number of errors and rate of reading. The results lent support to the hypothesis.

Treatment was then carried out using a desensitizing technique. He was taught with sheets of paper and then progressed through type-written scripts, to fastened type-written scripts, then to fastened type-written scripts with cardboard covers and finally to real books. Each new stage was not introduced until he was confident and relaxed with the previous one.

Six weeks after starting this systematic approach he was on to books and had a reading level of eight years on the Holborn Reading Scale (Watts 1948). He was then discharged back to school remedial teaching and was subsequently reported to be making satisfactory progress.

A case of parental pressure

The second case is that of an eight year old boy who attended a high pressure preparatory school. His mother insisted that he was dyslexic and wanted special help for him while he remained at the preparatory school.

The history and his early school books suggested that he had had fairly severe visual perceptual difficulties up to very recent times. His present reading ability as assessed by the Neale Analysis of Reading Ability (Watts 1966) revealed gross retardation in rate of reading, about eighteen months retardation in accuracy, and an average score on comprehension. His rate and accuracy were severely limited by the fact that he sounded out every single word phonically. This he had learned from his mother who had a collection of poorly digested books on reading in the sitting-room bookshelf. It was obvious from what she said that the whole household revolved around the boy's reading. On the other hand there was good evidence to suggest that his word recognition skills would have been less or nonexistent had the mother not been teaching him.

Two lines of action were taken to deal with this problem. First, the mother was congratulated on her past achievement but was told that he had now reached the point where he needed a different programme and that this was rather complicated and thus best carried out by the school.

The school was advised to promote fluency and comprehension by operant conditioning techniques rewarding him differentially for guessing at words for meaning and on a number of other tasks involving the rapid visual recognition of words. This was to be introduced slowly so that the boy would not notice the change in emphasis.

Progress was reviewed two months later. The psychologist was treated to a tirade of abuse by the mother. She had carried out her part and not taught him but she said the school had not carried out any special programme. In fact, retesting on the Neale Analysis of Reading Ability revealed that his reading rate and reading accuracy had risen to an average level and his comprehension to an above average level. Qualitatively, he no no longer sounded out every word and his school now regarded him as a good candidate for their senior department.

The case was closed at this point but a few months later the mother telephoned to say that she had had her son reassessed elsewhere and that he was diagnosed as dyslexic because his spelling attainment was considerably below his above average reading level.

A case of psycholinguistic difficulties

The subject in this case was a nine year old boy, from a wealthy upper-class family, who had completely failed to learn to read. Hearing and vision were said to be normal. He had just been ejected from a private school because of his lack of learning. He had also just been discharged from an excellent remedial centre after failing to make any progress there after a year's regular attendance. Intellectually he was labelled with a descending series of Stanford-Binet (Terman and Merrill 1960) IQs ranging from 87 at age six to 82 at age nine.

At the first interview he appeared slow speaking and dull. The first impression was of a severe dullard, certainly considerably lower than IQ 82. It was thought that perhaps he had been overestimated by previous testings — which could have resulted from a parrot-like vocabulary gained from his cultural background. The drop in his score over the years would be explained in terms of his failing when reasoning rather than vocabulary was required.

It was predicted that

1 he would score badly on nonverbal tests, i.e. IQ <70
2 he would score at the below average level on the WISC Verbal Scale, i.e. IQ 75–80 range (Wechsler 1949)
3 he might score as high as the low average level on the Crichton Vocabulary Scale (Raven 1947).

The tests were carried out. On both the Coloured Matrices (Raven 1947) and the WISC Performance Scale he scored at the low-average level (IQ 97 WISC Performance Scale). His verbal test scores, however, were at the inferior level (WISC Verbal Scale IQ 65, Crichton Vocabulary Scale <5th percentile).

These results completely refuted the hypothesis and led to a rejection of the explanation of his learning difficulties in terms of subnormal intelligence with a superficial verbal gloss.

One then had to explain the discrepancy between his verbal and visuospatial performances unless one was to resort to labelling him as intellectually subnormal with a specific ability for nonverbal tests.

Further interviewing and investigation of his concept of number suggested auditory memory and other psycholinguistic difficulties and it was decided to investigate these further with the Illinois Test of Psycholinguistic Abilities (Kirk *et al* 1968). Here he obtained average scores on seven of the ten subjects. His other three scores were very low — auditory association, auditory memory and vocal expression.

Surprisingly he obtained an average score on auditory reception. This suggested that he received auditory information in a satisfactory manner but that his difficulties arose from processing this information and retrieving it in the correct order.

In view of these findings it was assumed that he would learn to read if emphasis were placed on associating the written word with visual materials (pictures) or with motor actions thus circumventing his defective auditory channels.

This was tested by a series of learning experiments. Thirty words which he could not recognize were selected from books 1 to 3 of a widely-used reading scheme. These words were placed into three groups of ten words — one group consisting of nouns which could be drawn and another group consisting entirely of action verbs which could be performed within the confines of a clinic. The three sets of words were to be learned under different conditions:

1 Look and say. Under this condition he was shown the written word and told what it was.
2 Visual association. Under this condition he was shown the word and then an appropriate picture was placed above the word and the word was pronounced.
3 Motor association. Under this condition he was shown the word, shown the action, performed the action himself and then told the word.

It was predicted that he would take the fewest learning trials to reach the criterion of learning all of the words on the list under conditions 3, and perform worst on condition 1.

The results completely contradicted the predictions. The only list he managed to learn was list 1. List 3 had to be abandoned as he started to produce dangerous actions, e.g. attempting to fly — which did not occur on the list.

A qualitative analysis suggested that his difficulties lay with verbal association and retrieval and that if one presented him with a written word with other stimulation that this extra stimulation had a distracting rather than facilitating effect. This was exemplified by his response to the word 'fry' which was accompanied by a picture of a frying pan with egg and bacon in it. He responded after several paired associations of word and picture to the word alone with 'breakfast', 'egg', 'bacon', 'lunch' and did this when retested some weeks after the experiment had been concluded.

It was therefore hypothesized that he would learn to read most effectively (i.e. at the level of word recognition) if he was taught words by look and say method with no discussion of their meaning or pictorial representation.

This was finally put to the test. He was taught the words of a simple reading book by flash cards. He was then given the book and asked to read it. The odd numbered pages had the pictures covered while the even numbered pages were unaltered. His performance was measured in terms of percentage errors and rate of reading. The difference between the odd and the even numbered pages reached statistical significance in favour of the pictureless pages.

The conclusion from this was that if one wished this boy to learn to recognize words one should teach him with as little stimulation as possible — hence the failure of the original remedial teaching.

Conclusions

The purpose of this paper has been to illustrate how simple psychological experiments can help diagnose learning difficulties in operational terms with consequent implications for remediation. It is believed that this approach is both more fruitful in terms of diagnosis and makes more use of the psychologist's skills than simple diagnosis in terms of standardized test results.

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25 Towards early diagnosis of dyslexia (primary reading difficulty)

M. Newton and M. Thomson

Recently attention has been drawn to the many clinical studies of children referred for intransigent written-language problems who have no undue environmental stresses in their background (at least no more than many children who *do* read). Such children show a typical syndrome of behaviour patterns relating to inconsistencies in order, direction and sequence (Orton 1966, Critchley 1968). Such features have been related by these and other authors to 'cerebral dominance'. These children appear in every socioeconomic level, from all school systems and from all ranges of underlying ability. The earlier theories of the neurologists, who were aware of brain function, have been related to the new theories from linguistics, i.e. the question is asked 'What aspects of written language structures could be incompatible with the neural processing of the brain?' — incompatible, that is, with the organization of sensory and motor mechanisms whose job it is to perceive and execute the written symbols.

Work at Aston has been proceeding for the last ten years to interrelate these features of the reading problem; the relationship between individual, developing, perceptual and motor systems on the one hand and an arbitrary, symbolic, sequential and directional task on the other. A possible model has been derived.

The nature of the problem

With the above historical concepts and research in mind, an attempt has been made to construct a model of the interaction between the child's own skills and those necessary for written language. This can take the form of an 'interface' between the child and the system, and necessitates looking at both the child's developing learning pattern, and the written language system. Taking the written language first, this can be viewed in the light of findings from linguistics and psycholinguistics (Bloomfield 1942, Fries 1962). The first point relates to the primacy of spoken language, in that speech is the 'first symbol system', written language developing from this. The system is alphabetic; in other words, most speech sounds (phonemes) are represented by arbitrary symbols (graphemes) and these, unlike picture writing or Chinese pictogram (word writing), are symbolic and unrelated to the actual event in the environment.

The alphabet system is then expanded into word patterns (sequences of phoneme contrasts) and also spelling patterns (sequences of grapheme contrasts). Written language is thus sequential, in that letters and words must be put into a sequence. The letters (and words) must also be put into a correct order, in the sense that 'cat', when the order is changed, becomes 'act' — a word with a different meaning but with the same constituent letters. Written language is also directional, in that letters have mirror images e.g. b d, p q, m w, etc. Thus letters must be correct directionally; 'cnd' is not 'cup', whereas if the event itself (a cup) is turned around, upside down, etc it remains the same. Thus to succeed in written language, symbols must be related to an event and *perceived*, *stored*, and *reproduced* consistently in visual, auditory and motor activities. This therefore leads to an examination of the child's skills with respect to this system.

At five years old the developmental patterns of learning in the young child are immature. The perceptual and integrative systems fundamental to learning are not necessarily developed in such a way as to organize the written language system which society imposes. Intrinsic and extrinsic factors interact to produce each individual child with his or her own individual skills. Some of these skills derive from the underlying neurological and brain functions involved in the development of these skills (and of course these interact with environmental influences). Thus the sensory and motor mechanisms resulting from these underlying features are reflected in each child.

The teacher's role as far as written language is concerned is to establish whether the child's skills relate to the task which is presented. Is the child *perceiving* the directional, sequential nature of the language, visually and aurally? Can the child retain or reproduce these features? Is the child's motor coordination mature enough to reproduce our graphical system, or to be fluent in a left-right direction? Are these sensory and motor mechanisms (eye, ear, hand) able to integrate and perform the subtasks in this unidirectional, ordered system? Can the child cope with the concepts involved in relating arbitrary symbols to a concrete event? These are the types of question to ask when investigating the intrinsic skills the child brings with him to the task of reading, spelling and writing. These are derived from the hypothesis involving the lateralization of brain function in controlling language and the sensory/motor mechanism involved in language. The reader is referred elsewhere for an explanation of this approach (Newton and Thomson, 1974). This interaction between child and written system may be summarized in diagrammatic form (see Table 1).

Practical outcomes

Rationale

The research work has had a twofold aim. First, to investigate a phenomenon in a scientific manner in an attempt to promote more understanding of basic, underlying brain systems in relation to behaviour; second to apply some of the insights gained to the actual 'coalface' of teaching. The

Table 1 The interaction between child and written systems

Written language	*'Interface'*	*Skills required in child of 5 years*	*Attempted assessment by index*
Primacy of spoken language	— —	Level of language usage	Vocabulary scale Picture recognition
Alphabetic system	— —	Conceptual framework for a 'symbol'	Mental age measures — Draw-a-Man, copying designs
	— —	Perception of unit speech sounds and symbols used for these	Phoneme/grapheme correspondence. Sound discrimination
Word patterns (sequence of phoneme contrasts)	— —	Perception and retention of sounds in order	Auditory sequential memory
Spelling patterns (sequence of grapheme correspondence)	— —	Perception and retention or ordered symbols	Visual sequential memory (symbolic)
Ordered nature of language	— —	Phonemes produced in correct order	Sound blending
	— — —	Awareness of ordered events	Reproduction of common sequences (days of week, months of year)

Directional nature of symbols	—	Perception and retention of directionality	Visual sequential memory (pictorial) Knowledge of left and right
Practical execution of written language	—	Motor control and directional fluency	Graphomotor test Copying designs
Total arbitrary, ordered, sequential, directional symbolic system	—	Sensory and motor mechanisms able to integrate these events hypothesized as being more efficient when related to unilateral brain function	Laterality of eye, hand, ear, foot

research team is constantly motivated in their efforts by the continuing referrals of failing children to the weekly clinic. To the team the conclusion has become inescapable; how can teachers in the classroom, who have under their care practically every child in the country, be helped to recognize those children at risk in the verbally-based educational system and to recognize them in the earliest stages in order that appropriate teaching can be devised?

The diagnostic index

With these concepts in mind, it has been possible to construct a diagnostic instrument which may be used in the following manner:

1. To be administered after the child has been in school attendance for about six months and when the teacher has noticed difficulties in expected attainment discrepant with apparent 'intelligence' and social competence.
2. To be administered at seven plus for puzzling cases of nonattainment. This might include the 'slow-learning' child who can be equally affected by dyslexic-type confusions in symbolic material as well as lesser all-round intellectual functioning.
3. A clinical instrument for use by consultant specialists in cases where such a resistive learning pattern is present that further, deeper diagnosis is necessary.

This instrument, known as the Aston Index, consists of three parts which cover the above mentioned stages, designated Form 1, Form 2 and Form 3. In general, Forms 1 and 2 are divided up into three areas: general underlying ability, child and family laterality and reading history, and performance items relating to reading. The Index represents an 'integrated approach' and includes well-known items from various sources; these have been kept as basic as possible to fit within the time constraints of the teacher.

The following list of items is a reproduction from the Index:

Form 1

General underlying ability

1. Picture recognition
2. Vocabulary
3. Goodenough
4. Copying geometrical designs

Family history

1. Laterality
2. Birth history
3. Knowledge of left and right
4. General background factors

Form 2

General underlying ability

1. Goodenough
2. Vocabulary
3. Copying geometrical designs

Family history

1. Laterality
2. Birth history
3. Knowledge of left and right

Performance items	*Performance items*
1 Write or copy name three times	1 Reading Schonell
2 Grapheme/phoneme correspondence	2 Spelling Schonell
3 Visual sequential memory	3 Grapheme/phoneme correspondence
4 Digits — forward and reverse	4 Free writing
5 Sound blending	5 Graphomotor
6 Sound discrimination	6 Visual sequential memory
	7 Auditory sequential memory
	8 Sound blending
	9 Sound discrimination

Form 1 is for use with children who have been in school about six months. The area of 'general underlying ability' is included to measure the child's ability to give verbal labels to the world around him; before reading and writing can be attempted, the ability to conceptualize objects is of paramount importance (early verbalizations consist mainly of nouns). Related to this is the vocabulary scale which looks at the ability to extract meaning from words and identifies the receptive understanding of the child. Reading and writing cannot progress in a satisfactory manner if the child derives no meaning from the words he is using. Many children, however, although understanding verbal concepts and semantics, are still unable to acquire the automatic, sequential and arbitrary skills involved in written language. The Index assesses such potential in the performance section. The Goodenough 'Draw-a-Man' test is included to obtain some idea of [illegible] child's general ability. The results yielded by this apparently simple drawing test have been found to correlate highly with scores obtained from other individual measures of intelligence. It is necessary to establish such 'readiness' level, as a child with slow learning potential (i.e. of low mental age) may be at risk anyway in his ability to acquire the conceptual framework, as well as possible difficulties in perceptual skills.

Copying geometrical designs requires the child to draw the shapes of a circle, square, triangle and diamond. Performance on this task gives a measure of the perceptuomotor development of the child. At five or six years old, most children should be able to reproduce a circle and a square, and at seven years are able to copy adequately a triangle and a diamond. As well as the clinical and observational experience of the writers and many other educationists on these indices of development stages, these items have their origin in well-standardized and accepted tests such as the EPVT, Stanford-Binet Intelligence Scale, and Goodenough Test, thus providing the rationale behind the 'general underlying ability' concept.

The second area explores the family background and child's laterality. The type of specific reading difficulty under investigation is often a familial one, as well as being associated with underlying patterns of laterality and cerebral dominance. The child's laterality is therefore explored

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by a number of items investigating handedness, footedness, eyedness etc. A pattern of inconsistent laterality (e.g. left eye/right hand) or uncertain and confused handedness could be indicative of difficulties in ordering and sequencing the unidirectional task of reading. The pattern of family laterality is also noted because an indication of uncertain dominance and confused laterality often revealed in these cases, together with a history of poor spelling or reading, gives an insight into the familial and genetic nature of the disability (Critchley 1968, Orton 1966, Newton 1970, Naidoo 1972, Zangwill 1962 and many others).

If possible the birth history is also noted, as frequently an 'at risk' birth may give rise to later difficulties in symbolic types of learning at school (Kawi and Pasamanick 1959).

It is also well established that psychogenic factors may block the acquisition of symbolic learning. A question is included to cover these other influences (e.g. sociocultural, linguistic experience etc).

The performance items forming the third part of Form 2 are those which have been found to correlate with this type of reading difficulty. The visual sequential subtests and the auditory sequential (digits forward and reverse) subtests are included. These give an indication of the ability the child has to order sounds or symbols in an arbitrary sequence, which is of paramount importance in this directional task. The nature of the task to be learnt (reading, spelling, writing) requires the perception, retention, and reproduction of sounds and symbols in an order and sequence (Naidoo 1962, Thomson 1971, Goldberg 1972). The visual sequential memory consists of symbols and pictures in sequence which the child has to put in the correct order after having a sequence shown to him by the tester. The digit span consists of the child repeating a series of digits in the same order, and in the second test, in the reverse order. Poor performance in these sequencing types of task would again be indicative of a specific directional and sequencing difficulty.

A sound blending subtest is included to measure the ability to make a meaningful word from its constituent sounds (e.g. c-a-t makes? — again often a particular difficulty) and also to give the teacher some idea of the efficacy of a phonic approach to reading. Relative superiority in either the visual or auditory subtest would of course have important remedial implications, e.g. a stress on the better skill to acquire *some* reading, with overlearning teaching to improve the weaker. Finally, a sound-discrimination test is included to test simply the ability of the child to repeat words that are spoken to him, as a crude auditory acuity measure. Special attention is directed to initial and final sounds. Both these tests relate to the ability to distinguish phonemes, and to blend these together to make symbolic sense (Bannatyne 1969, Shankweiler and Liberman 1972).

Form 2 consists of the same items as Form 1 for the performance section, except that the picture recognition has been dropped from the general ability section and it is suggested that other general ability measures such as EPVT and Ravens Matrices are used. Because Form 2 is more of a diagnostic instrument than an 'early warning system', some further items have been included in the performance section.

In order to measure the dependent variable, the Schonell Reading and Spelling Tests are included. Reading and spelling age are based upon graded words becoming progressively more difficult. The level of reading and spelling should, of course, be related to the child's ability as well as to his chronological age to get a real measure of under- or overachievement.

A sample of free writing is included, and this can be an important diagnostic feature. The number of reversals, bizarre spellings, pure phonetic spellings, general motor control, fluency of idea and expression, syntax, punctuation etc, may all add up to an overall picture of the child's abilities, and particular attention should be directed to a discrepancy between the child's written performance and his language and intelligence levels as manifested orally. (Criteria for free writing items — Rabinovitch 1968, Critchley 1968, Miles 1970, Newton 1970).

The final performance item is the graphomotor test in which the child copies a pattern with right hand and left hand, with both at once and in different directions. This gives a general idea of fluency and motor control as well as relating to the laterality items — Is the child fluent with both hands? Can he cope with two directions at once easily? etc. Difficulties in directional motor fluency are highlighted. This test is derived from work on directional confusion in skilled tasks (Gerhardt 1959).

Form 2 then should give a wide view of the child's abilities and skills in relation to the reading and writing task.

Form 3 does not include any specific test items, but gives examples of the types of tests which might be used if further diagnosis is necessary, and suggests referral to specialist agencies if any problem is highlighted.

Evaluation of the Index

The Index as described above has been derived from previous research and clinical experience as well as an analysis as to the nature of written language. The test battery is at present being validated and standardized. This is being done both by ourselves and by teachers who are using the Index in an experimental fashion (after undergoing a short 'training' meeting), who feed back data and comments to the researchers. The main predictive study involves a follow-up over a three year period of five and a half year olds from different schools, as well as results from teachers which will be followed up. This will provide a measure of predictive validity. The Index as a diagnostic instrument for concurrent use with children with difficulties (Form 2) has been undertaken with children referred to the Department with reading difficulties, with results returned by teachers, and also with groups of readers and nonreaders within the school system. Reports on these interim findings are in press. These studies show considerable variation in test scores between individuals, and discriminate between readers and nonreaders, and are thus supportive of the view that these criteria measure some significant individual differences in children and of the concurrent validity of these items as a screening procedure.

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26 The teaching of reading to deaf children — a research report

Jean Palmer

The research reported here was directed by G.W. Redgate and the writer and was undertaken between 1965 and 1971. Because educational ideas have changed in the intervening period, some of the decisions made then would have been different if present-day knowledge had been available.

The background of the research

For many years there had been strong feeling within the professional body of teachers of the deaf that reading books produced for ordinary children were, on the whole, unsuitable for the needs of deaf children, whose problems in reading are both complex and profound. Research findings had confirmed the very low attainments in reading of deaf pupils in the United Kingdom. For example, Redgate (1964) in testing the reading of the whole population of 144 deaf children aged eight, nine and ten years in eight schools for the deaf found that only fifty-six of these pupils were able to begin Schonell's Silent Reading Test A. The mean reading age of these children was 6 years 10 months. Bates (1956) had found retardation in reading of from two to three years in entrants to the grammar school for the deaf.

In 1961 the reading research unit of the London Institute of Education launched an experiment using ita as a medium. Interim reports claimed superiority for the ita groups in comprehension, accuracy and speed of reading, in spelling and in quality of creative writing. In 1963 the Oldham School for the Deaf began to use ita. Again, progress was encouraging, and it seemed as though the tentative promise of ita for deaf children could not be ignored.

Such considerations led to the design of an experiment which, it was hoped, would not only help to decide whether ita would hold any worthwhile promise as a medium for teaching deaf children but would *also* give an opportunity to teach reading systematically, using an established reading scheme. It was hoped that this design would also give a fair means of evaluating whether special reading material is necessary for deaf children.

Outline of the experiment

Two hypotheses were formulated:

1 Gains in reading attainment would be different for two groups of deaf children using two different systems of orthography — traditional and ita. To test this hypothesis it would be necessary to ensure that any differences in reading attainment could not be due to differences in reading material.

2 Groups of children taught reading systematically, using a particular published scheme, would show greater gains than a group not using a particular scheme. Therefore a third control group of deaf children was added to the experiment to investigate the progress made when taught by less systematic approaches to reading followed by most schools for the deaf. The only 'intervention' by the research team in the teaching of reading to children in this control group would be in the form of research workers going into the schools annually to administer the same battery of tests that was being administered to the children in the experimental groups.

It was planned to collect information from the teachers during the progress of the experiment which would ascertain the need, if any, for additional material to supplement the reading scheme being used and which would guide the researchers in designing such material as might be proved necessary. This last aim was not achieved.

Choosing a reading scheme

The full-time research worker observed the use of various schemes in schools and analysed twenty-two schemes. Of these, only four were printed in both TO and ita. These schemes were Beacon, Old Lob, Janet and John and McKee. For various reasons the McKee scheme was finally chosen, though at all times the researchers stressed that they did not think this is a *good* scheme for deaf children — merely the scheme with the fewest disadvantages.

Choosing the schools

For the sample to be fair, the schools needed to be comparable in terms of such aspects as hearing loss, intelligence and socioeconomic level of their intake. It was decided that, because the communication difficulties of deaf children would necessitate the individual administration of tests, a total of twelve schools would be as many as could be adequately supervised. (Twelve schools constituted approximately 22 per cent of the schools for hearing impaired children in England, Scotland and Wales). As implied earlier, four schools were to use TO, four ita and the other four were to form the control group.

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Variations in methods of teaching

The researchers tried to ensure some comparability in the way reading was to be taught in the schools in the TO and ita groups by bringing all participating teachers to Manchester on short, residential courses consisting of lectures, discussions and workshops. As a further attempt to standardize procedures, strong suggestions were made at these courses about the time which might be allocated to reading activities of various kinds. Further, the research team arranged to test each year throughout the course of the project not only the reading attainments but also other abilities as well, for example number and oral language (receptive and expressive). It was thought that this would discourage teachers from spending a disproportionate amount of time on the teaching of reading.

Age of entry of pupils to the experiment and total numbers

It was decided that the experiment should start with young deaf children aged five and a half to six and a half years — partly because the experiment was only to run, initially, for three years and it would be difficult to obtain measurable results in that time if younger children were used. However, because of the wide age range obtaining in most classes, and to avoid making the organization of the experiment too complicated, all children in classes containing the majority of five and a half to six and a half year olds were included. This increased the age range from 4 years 4 months to 8 years 0 months, the mean age being 6 years 1 month for a total sample of 131 pupils from twelve schools. Since this total number was quite small, and since it was anticipated that matching of the groups on age, intelligence and hearing loss would reduce the number still further, in the following year children who were then in classes containing pupils who had reached the age of five and a half years were brought into the experiment. There were 114 such children which gave a total sample of 245 before matching. The mean age of this 1967 entry group was 5 years 8 months and the range was from 4 years 7 months to 6 years 9 months. After matching, the total numbers were reduced to 207 children (104 boys and 103 girls, with sixty-eight in the ita group, sixty-nine in the TO group and seventy in the control group).

Duration of the experiment

Headteachers were asked to cooperate for at least three years, although the researchers envisaged that a longer period than this would be required before significant differences in rates of progress might emerge, because of the known linguistic and experiential retardation of deaf children which causes them to be slow-learning. In the event, the main experiment lasted for four years, starting in 1965 and ending in 1970. Even then, the project ended before its long-term effects could be measured.

The Hawthorne effect

Attempts were made to minimize differences in motivation between teachers in the ita and control groups. Teachers of the control group knew their children were being tested and it was realized that this could spur them on to greater efforts. The researchers intended, at a late stage in the experiment, to test the reading attainments in at least two schools for the deaf not connected with the experiment. This would provide an independent yardstick against which to measure the results in the experimental groups. Unfortunately this plan could not be carried out. Nevertheless, a survey (1966–7) of the reading attainments of 698 deaf children aged nine to seventeen plus years provided a useful comparison.

Selection requirements and administration of tests

Because of the communication difficulties with deaf children, the researchers decided that all attainment tests must be administered by people experienced in working with deaf children and that as few testers as possible should be deployed to minimize variations in response due to differences in rapport established by testers. Detailed procedures for test administration were devised. Intelligence tests were administered by qualified psychologists who had worked with deaf children. As far as possible, tests were chosen which had already been used successfully with deaf children. Pilot studies were made of other tests with deaf children not in the experiment.

ita versions of reading tests were to be administered to the ita group until the children had transferred to TO. All children had transferred by April 1970.

The tests

The following tests were administered annually:

1. Owrid's Oral Language Test (Toy Vocabulary). A test of expressive language in which the subject is required to name twenty-five toys presented one at a time.
2. Daniels and Diack's Visual Discrimination and Orientation Test.
3. A number test devised by the researchers as no suitable test was available.
4. The Gates-McGinitie Reading Test, Primary A, Form 1.
5. The Southgate Group Reading Test, Test 2, (Form A) which was to be given to children who scored highly on Gates-McGinitie.
6. Schonell's Mechanical Arithmetic Test — which was to be given to children who scored highly on the Number Test.

Other tests administered once only were:

1. The Wechsler Intelligence Scale for Children (Performance Scale).
2. A pure-tone audiometric test of hearing.
3. Myklebust's Picture Story Language Test.

After the first year, the Peabody Picture Vocabulary Test, Form A, was administered each year to all children. This was used as a test of receptive language.

Statistical treatment of results

It was decided that the different treatment groups would be matched on the basis of t or F tests of the significance of differences between means. Main results would be submitted to analysis of variance techniques and factor analysis would be used to investigate the size of the relationships among the considerable number of different test scores and case-history findings. In addition, analyses of covariance were used as well.

School and home variables

Information about each child was obtained from school records and teachers. The variables included the following:

1 type of attendance — residential or day
2 changes of school
3 average time with teacher
4 experience of teacher
5 age on entry to experiment
6 preschool guidance
7 age on admission to school
8 regularity of attendance
9 laterality
10 minor additional physical handicaps
11 use of speech
12 understanding of speech
13 personal attributes — e.g. confidence, persistence
14 attitude of parents to child's progress
15 social class
16 number in family
17 country of origin of parents
18 sex of child

Summary of results and conclusions

Reading attainments

The TO group performed significantly better in reading at the end of the experiment than the other two groups, whether one considers the combined 1966 and 1967 entry groups, matched or unmatched, or the separate entry groups, matched or unmatched.

In the 1966 entry group, the reading attainments of the TO and ita samples did not reach a significant level of difference in scores until the end of the fourth year, after the transition to TO by the ita children. This significance was at the 5 per cent level. This significant difference could not be attributed to a relative setback of ita children after the transition because there was no evidence of such a setback and the TO group was pulling away from the ita group in reading even before the transition. Scrutiny of the graphs for the 1967 matched groups would support this pulling away of the TO group from the ita group in reading relative to the other language skills. Indeed, after three years' instruction, the difference in favour of the TO group was highly significant (at the 1 per cent level). This trend for the TO group to pull ahead should not be lightly dismissed.

The 1966 and 1967 matched entries of the control group were significantly inferior initially to one or both of the other groups in Peabody Vocabulary and Oral language. It started, therefore, at a disadvantage although its attainments in reading were not significantly inferior initially. The fact that the reading attainments of this control group were not significantly inferior at the end of the experiment to the equivalent ita groups confirms the finding that ita holds no promise as a medium for teaching reading to deaf children.

The TO group pulled away from the control group in reading and it might, therefore, be concluded with caution that the controlled approach to reading represented by the McKee scheme was advantageous.

Unfortunately, the reading results cannot be expressed in terms of mean reading ages for the whole sample since some children did not reach the level at which they could be given the Southgate test. The mean reading age on Southgate for each experimental group and for each age group was, with one exception, below eight years at the end of the experiment. (Wilkins, in the independent study of 698 children referred to earlier, had found that the mean reading age for each age group of deaf children up to seventeen years was below eight years.)

The correlation matrices

As expected there was a relatively high correlation, of the order of 0.6 or 0.7, between reading attainment and other measures of language ability. Both the Peabody and Owrid Tests were good predictors of reading attainment.

Attitudes of father and mother to school progress correlated highly significantly with reading attainments after two years for the combined entry groups. This finding seems to emphasize the necessity constantly reiterated by psychologists and sociologists to involve parents more closely in the work of the school.

The low correlation, $r = 0.068$, between reading attainment and preschool guidance is interesting, especially in view of the importance attached to guidance by professional workers. However, this may simply indicate that parental guidance is frequently orientated in the wrong direction.

Age on admission to school was not shown to be significantly related to attainments in reading ($r = 0.002$). It may be that a study of the role of the nursery school for the deaf and an analysis of its manifest and latent functions would be rewarding.

Length of experience of teachers did not correlate highly with reading attainment.

Other findings of interest

The teacher variable

The analysis of attainment test scores, school by school, showed that there were probably variations in teacher quality which resulted in performances running, in individual classes in schools, counter to the main trends. This analysis highlights the importance of teacher-quality in the education of deaf children who are so dependent on their teacher.

Oral language and ita

The reading test results showed that the ita group fell steadily behind the TO group as time progressed. However, the oral language tests did not show a similar widening of the gap. It could be argued that the greater improvement in oral language attainment, relative to progress in reading, shown by the ita group, lends some support to the opinion of some of the ita teachers that ita helps deaf children's speech because of its greater grapheme/phoneme correspondence. This finding would indicate that greater use of signalling systems on the printed page, which do not involve transfer from one medium to another at a later stage, might be beneficial to speech work with deaf children.

Suggestions for possible future action

As a result of this research, three suggestions were made for possible future action:

1. The possibility of devising better, structured reading material for deaf children should be looked into and, in doing this, the relationship of reading with other forms of language acquisition should be seriously considered.
2. The possibility of incorporating a signalling system into any material devised should be investigated.
3. Since teacher quality is so vital, any improvements which can be made in teaching generally should benefit the teaching of reading.

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27 Adult literacy provision: shadow or substance?

Tom MacFarlane

The sober fact seems to be that about 17 per cent of our school leavers (Clyne 1972) are functionally illiterate, and a good many more will relapse into that state before many years have passed. Those who know the secondary-school situation in our large conurbations will almost certainly regard this as a reasonable view.

Michael Haviland's (1973) survey reported that in 1972 a mere 5,170 adults were receiving literacy tuition, and even allowing for the growth of schemes since then, it is clear that the impact of present provision on the size of the problem is miniscule.

In addition we have a dearth of knowledge regarding the actual achievements of existing schemes. Also, there is a worrying bandwagon phenomenon in progress which may well roll by with much 'sound and fury' leaving us where we were before. Unfortunately this may persuade those in authority, and the public, that the noise has solved the problem.

All factors relating to adult literacy problems need careful scrutiny, but in this paper I shall confine myself to the issues raised by the relationship of the reading curriculum to the needs of pupils, and the training of tutors.

The reading curriculum in adult literacy is a function of the process by which the tutor relates to the pupil. This could be an authoritarian posture, consciously or otherwise, in which the tutor decided that he or she knows best, not simply how to teach reading skills, but what the context of the curriculum should be. Alternatively, the tutor and pupil could be engaged in a dialogue from which the tutor learns where the pupil is going and tries to provide a relevant content based on the pupil's expressed or implied needs.

One problem here, some would feel, is the danger of adult literacy tutors building a 'political' ethos around reading which will imperceptibly become a new authoritarian view of the curriculum. Herein lies the danger of an overenthusiastic interpretation of the sociological implications of Paulo Freire's work.

Looked at from this philosophical angle the specific questions about content become not 'What should we teach?' but 'What does *my* pupil want *me* to teach?' or, better still, 'What shall we learn together?'

This is obviously far removed from the normal reading situation currently met in schools in the UK, though one hopes that the combined impact of the Open University Reading Development Course, and feedback from adult literacy work of the best kind, will challenge current practice.

The adult literacy tutor is challenged at two levels: personal and technical. At a personal level the tutor must know how to 'read' the information coming from the pupil in terms of what it tells him, or her, about the pupil's needs and interests; and secondly, at a technical level, he must be able not simply to find relevant materials but to link such materials to the ability level of the pupil.

This model rejects the view that reading is a decoding process only, with meaning incidentally and haphazardly acquired by the pupil. Not every tutor will feel able to accept this point of view, *nor will every pupil want to engage in such a learning dialogue*. However, the position is worth stating because it puts into perspective the incessant demands for 'adult-based' materials and social literacy 'programmes' — these will be well and good if used by tutors as 'resources banks'. But, used in the traditional 'I-know-best-for-you' situation they could become nearly as meaningless as the current dependence on school-based reading materials.

The work of the Centerprise Publishing Project in Hackney is dramatically illustrative of the hidden depth of talent locked away in the minds of the so called 'disadvantaged', and should force us to look again at what could be achieved if pupils were allowed to 'write it themselves', or should I say 'dictate it themselves'? I hope it is unnecessary to point out that a patronizing attitude would kill this as surely as the 'you're-only-here-for-the-code' syndrome.

There is a clear division in practice in adult literacy schemes in the areas of pupil induction and diagnosis. Some begin with lengthy, albeit pupil-centred interviews, and build up a mass of information. Others begin with no information and set out with a clean slate view of the situation. It is not clear how far this dichotomy is a function of teacher/organizer philosophy on the one hand or, on the other, a function of the growth of a bureaucracy faced with organizer-tutor communication problems. An added dimension here is the amount of information needed by the tutor, and this must depend to some extent on the tutor's level of competence and experience.

There is no doubt that we are desperately short of hard evaluation in adult literacy work. Therefore, I would like to put forward some questions for future discussion:

1 What do we *need* to know about a pupil at the point of induction?
2 How can a relatively less competent tutor best be helped through the first couple of meetings with a new pupil?
3 What aids to communication would personalize large schemes?
4 What methods might be used to evaluate a tutor-pupil relationship for dependency factors, pupil progress, and the tutor's ongoing development at a technical level?

Clearly much wider issues are raised here than those narrowly relating to induction and diagnosis. All that can be suggested at this stage is that we might *question* such assumptions as, for example, the need to obtain a reading age — whatever that might now mean in the light of the discussion of the content of the reading curriculum.

Fundamental issues are also raised on the induction and training of tutors. If we are right broadly to adopt the curricula concepts outlined above, then the tutor training implications are massive. The present concept of a few evenings training course followed by lip-service to 'ongoing' training will need radical modification.

First, different groups of tutors will need different courses. Professional remedial teachers, for example, may need considerable education away from such hang-ups on sterile debates about look and say versus phonic methods, the Prester John-style search for 'the best' materials, and that most irrelevant of remedial concepts, the so called 'social sight vocabulary'.

Volunteers untrained in the techniques of teaching reading and the complex levels involved in the reading process obviously have different needs. Here the debate might well centre around the theme of on the spot observation and training followed by a course, as against long formal courses at the earliest stages.

The overall needs of all groups of tutors must, however, include rigorous exploration of personal attitudes and empathy, with a possible consideration of the careful use of role-play and simulation techniques rather than formal lectures.

It is common to end with a sermon on the need for more money and resources. Of course that is vital: nothing said must detract from such demands. But this is not our prime target. The prime concern at this stage should centre around the issue of who is to train and appoint the trainers. If adult literacy provision in this country is to be substance rather than shadow this question must be our first concern.

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28 Broadcasting and the problems of adult illiteracy in the UK

David Hargreaves

The size of the problem

The standstill, or even decline, in standards of literacy is one of the country's gravest educational problems. The BBC is already devoting a substantial proportion of the resources of school broadcasting to the development of reading skills. This paper outlines the thinking which has guided the BBC in planning its contribution to the drive to reduce illiteracy among adults.

By 'illiterate' and 'subliterate' educationists mean adults with reading and writing skills less than those of the average nine year olds. Estimates of the number of adults in the United Kingdom who are subliterate on this criterion vary in the range of one million to two million. As more research is done the estimates are tending to concentrate in the higher end of the range. It is also increasingly argued that a reading age of nine does not represent functional literacy in our society. This point can best be appreciated by a glance at the reading ages necessary to comprehend the following examples of the printed word:

Daily Mirror/Sun	10.4
Recipes on tins of Batchelor's soup	10.1–17.0
Premium Savings Bond Form	12.2
Application for rent allowance	13.3
Highway Code (except for one passage)	14.0
Income Supplement Leaflet	16.4

If, as some educationists argue, functional literacy were taken as being a reading age of about thirteen, the number of adults defined as illiterate would increase dramatically. The gravity of a situation in which several million adults in Britain are incapable of reading a newspaper, or indeed any print relating, say, to election or trade union issues is obvious. Unhappily the problem is increasing in scale.

What emerges over and over again in discussion with teachers of adult illiterates is the degree to which feelings of shame and isolation prevent individuals from seeking help, even in those few who realize that sources of help exist. At present few illiterates come forward to centres which can help them, and there are obvious practical difficulties in how the centres can make themselves known to illiterates.

The contribution of broadcasting

In this situation broadcasting could make a unique and important contribution because of its ability to reach people in the privacy of their homes. It could:

1 provide programmes that nourish the intention to learn, going over the early steps of reading that may have caused difficulty, gradually bringing the adult to the point where he might feel sufficient confidence to seek help outside the home
2 publicise the sources of help
3 assist in the training of helpers.

A major BBC effort in this field will hopefully be a useful educational initiative. The number of people for whom the programmes would have personal relevance is clearly very large. It could be argued that an attack on the literacy problem is of comparable educational significance, and at least as high in social priority as, say, the bringing into existence of the Open University.

It is, of course, uncharted territory. Broadcasting has been used in other countries as a major element in campaigns to eradicate adult illiteracy; Italy and Jamaica are the best-known examples. But these have been campaigns in rural societies, where groups often came together around the one available television set, and teaching from the screen was followed immediately by work with a teacher. They were campaigns in situations where illiteracy was normal and bore no stigma. The effectiveness of broadcasting in teaching isolated individuals to read is not proven. This paper makes the assumption that the main success of broadcasting is likely to be in eroding feelings of isolation and embarrassment, in creating a sense of modest progress and in spurring the adult to seek help from specialist teachers. And this brings us to the key questions of relationships with other agencies.

The proposed broadcast provision

A full contribution from the BBC would spread beyond the confines of specifically 'educational' broadcasting. However, we will begin by outlining the contribution that educational broadcasting plans to make over the next few years. We deal first with broadcasting directed at the learner, then with broadcasting directed at the teacher.

Broadcasting and the learner

We have begun by making two assumptions:

1 that every year fresh adults will wish to reduce their problems in reading and writing
2 that the problems of limited airtime will mean that we cannot broadcast material at an ever increasing range of levels, on the Open University pattern.

The model we describe below envisages three levels of instruction only:

1 by 'first level' we mean starting from almost zero knowledge
2 by 'second level' we mean material still suitable for reading ages below seven, but intended for committed learners
3 by 'third level' we mean material aimed at reading ages of seven plus.

Our first, and very fundamental proposition, is that Further Education Broadcasting should make its contribution entirely in the first two levels — i.e. below a reading age of seven. BBC School Broadcasting makes provision at the third level. In fact the intended purchase by School Broadcasting of *The Electric Company* has been a key factor in our thinking. It is a brilliant and entertaining series, provided by the makers of *Sesame Street* and the BBC intends using it to help reading in secondary schools. Although it is aimed at children, it is recognized in the USA to be attractive and of value to adult illiterates as well, largely because of the sophistication and pace of its production techniques. It is likely to be on the air here in the period 1975–7, and possibly beyond. It will be broadcast in daytime 'school' placings and is to that extent not ideal for adult use. But it is a resource which institutions can record and we think that the parallel transmission of two levels of further education programmes plus *The Electric Company* gives a wide spread of provision and is an economic use of our resources.

There are also specific reasons why we think the further education provision should be at the lower end of the reading spectrum. We think that watching television at home can little by little create confidence and reduce embarrassment about difficulties in reading and writing. The more basic the level at which we work, the greater the creation of confidence and sense of the possibility of learning. It is in the erosion of inhibition and of the sense of hopelessness that our contribution can be greatest.

We believe that our contribution to a national campaign for improved adult literacy ought to be a long-term one; we would regard this area as one of our priorities. The model proposed extends over three years. If evaluation suggests that it is worthwhile, a second cycle of programming could be undertaken, extending from winter 1977–8 to 1980. This second cycle would attempt to do the same educational job as the first, but it would hopefully be more effective as a result of research into our earlier efforts.

We see the *first-level course* as aiming to erode inhibition and anxiety, and we would make it as attractive and engaging as possible. We see it as fifty-two television programmes, each of roughly ten minutes duration, and each programme having three showings within the week. It is an all year round provision. Since its object is to nourish the intention to learn, it should be transmitted at times when it is easy for people to watch. So our next fundamental proposition is that the first-level programmes should not only be broadcast at the usual FE times. Ideally, we would like an afternoon spot, an early-evening spot and a midevening spot on different days. This range of times would make the programmes accessible to most adults, including those on shiftwork. The thrice-weekly pattern would also be valuable in making revision and consolidation possible. In making the programmes we can work to whatever short durations are convenient to the general service and we can make sure that the programmes are sufficiently attractive adult entertainment not to alienate the literate. *The Electric Company* has shown that this is possible, given sufficient funds. There is no doubt that this proposition about airtime presents problems for the general television service, which is already under great pressure to find time for a wide range of competing interests. Clearly the suitability of transmission times would drastically affect the impact of what we did.

It is important that the first-level course should be of immediate practical help to the functionally illiterate. Full attention to social sight words — 'danger', 'poison', etc — is obviously one element in this. Another would be the inclusion in the series of help with simple practical problems — for instance reading the instructions on a self-service petrol pump. We would make the programmes modular, with some elements that latched on to the events and pop songs of the moment. We would, of course, remake these 'immediate' elements for the second year's showing.

We would try to take full advantage of the potential of mainstream television to reinforce what we have taught, e.g. using words like 'News', 'Grandstand', 'Match of the Day' as examples of particular points. Ideally one would like to use product names, but clearly that presents insuperable problems in disentangling education from advertising. Throughout the series we would show people with reading and writing difficulties talking freely about them.

By *a second-level course* we mean quite simply programmes that begin where the first-level ended, but which assume a greater willingness to work hard at learning. We think this provision is essential as a continued encouragement to people whose enthusiasm has been aroused by the first-level programmes. We assume that a growing proportion of this audience, but not yet the majority, will be getting some other help. The programmes should be as attractive and entertaining as in the first-level series, but they would be longer — say twenty-five minutes each. They would be on Sunday and Saturday mornings within the normal times of FE broadcasting. We envisage a series of twenty such programmes.

We think that in this follow up course for the more serious learner, radio could provide valuable learning experience. Readings of texts which the student had would be very worthwhile. These readings might be at different speeds. One could envisage twenty ten-minute programmes running parallel to the second-level television programmes. In local radio there might be the possibility of readings from local newspapers, local election manifestos, local public notices etc.

Support materials

The reference to texts leads one to the vital question of nonbroadcast material — students' books, teachers' books, materials for class use etc. There is a chronic lack of materials specially designed for adults. Materials for teachers and for class use do not present any major problems. However, providing suitable printed support for individual adult learners presents very grave difficulties. Firstly, and most obviously, there is the problem of designing something which there will be no stigma in buying. People with reading difficulties do not want the shopkeeper or newsagent to discover their disability. Second, there is the problem of designing something which is educationally suitable and still *adult*. Adult learners want to read real newspapers and real books: they naturally react against anything that looks like a child's reader with pictures. Ideally one would wish to devise printed material that could take advantage of topicality and make educational use of interest in events of the moment. One attractive solution to this problem might be to produce material which can be incorporated on a regular basis in existing newspapers or magazines. We could, for instance, investigate the possibility of creating a simple quarter-page graded text or word game for syndication to newspapers.

Broadcasting and the teacher

We can distinguish two problems here:

1 that of helping people within the family group to encourage and sustain the learning of those reached by our first-level programmes
2 that of mobilizing and providing guidance to more educated *volunteer teachers*, whether their teaching is to be in classes or on a one-to-one basis.

The first problem can best be attacked by short interview material placed inside popular programmes on radio and television — *Nationwide*, the *Jimmy Young Show*, *Woman's Hour*, *Parents and Children*, *Saville's Travels* etc. It calls for educational broadcasters to sustain the interest of the editors of popular programmes in the family aspects of the illiteracy problem, and to research and provide material which popular programmes can rework in their particular house styles.

The second problem — that of mobilizing and advising the volunteer teacher — needs special programming. It can be most economically done on radio rather than on television and we suggest that FE radio make a series of ten twenty-minute programmes. There is difficulty in that the times normally available to educational broadcasting on Radio 3 are not well suited to the 'mobilizing' function: there is no institutional or other network that can help us to publicise the existence of the series to *potential* volunteer teachers, who may come from any walk of life. We suggest that the ideal transmission time would be during the daytime hours on Sundays on Radio 4, starting in September 1975. To maximize the effect of the programmes we could then repeat them in normal FE times on Radio 3, starting in midautumn 1975. In years after 1975 transmissions of such a series would be unlikely to need times outside educational airtime, because the ongoing total broadcasting project would, it is hoped, itself spur people into volunteering to help and into contact with existing organizations.

A total BBC strategy?

It is clear that the problems inherent in mounting a major BBC initiative in the field of adult illiteracy are substantial, particularly in the matter of suitable airtime. The effect of the project would be seriously weakened by a strict confinement within normal 'educational' airtime. In addition to the programming already described, we would like to offer BBC 1 a fifty-minute documentary on adult illiteracy in the United Kingdom, to act as a curtain raiser for the whole broadcast campaign. 'Campaign' is perhaps an emotive word, and the scale of the project described is clearly very ambitious. But the level of literacy in our society is a matter for grave concern, and we should surely consider whether broadcasting has a role in redressing this situation. Should a sustained assault on adult illiteracy be one of the BBC's priorities in the next few years? If so, should we look across the breadth of our programming for chances to work at the problem?

Part 7
International seminar

29 The international seminar: reading in differing languages and cultures

John Downing

This international seminar has developed out of the growing interest in comparing how children learn to read in different languages and in varying cultural circumstances. 'Comparative reading' is the name that has been given to this new area of interest. This name appeared in the literature for the first time in the volume (Figurel 1969) of the proceedings of the International Reading Association's convention at Boston, Massachusetts in 1968. Comparative reading has four main objectives:

1 The gathering together and application of practical teaching know-how from all countries of the world, as exemplified by Gray's (1956) classic work for UNESCO.
2 The compilation of the 'natural history' of reading. In other words, descriptions of how reading is learned and used in different countries simply for the sake of that knowledge itself, for example, Morris 1967.
3 The development of a better theoretical understanding of the psycholinguistic processes of learning to read and reading, through the application of comparative, cross-cultural, and cross-language research methods from the sciences of psychology, anthropology, sociology, linguistics, and so on. An example of this aim is the book *Comparative Reading* (Downing 1973).
4 Improvements in the training of teachers and specialists in reading through new courses in comparative reading. Douglass (1969) has pointed out: 'it is sometimes instructive to take a look at the ways of other people as they work with children; not because they warrant being copied, but rather for purposes of contrast so that one may be helped to entertain ideas that could lead to useful modifications in ways of helping children learn.' Similarly, in linguistics, Whorf (1941) recommended strongly the study of languages remarkably different to the student's own native tongue because, 'in its study we are at long last pushed willynilly out of our ruts. Then we find that the exotic language is a mirror held up to our own.' This international seminar itself is an example of this fourth objective.

Clearly comparative reading is not merely a part of the subject of comparative education. Indeed, although the approaches conventionally employed in the study of comparative education might help with objective number two above, they would not take us far toward the other three goals. Reaching these four objectives is clearly impossible through any one single traditional scholarly discipline. Obviously this new area of investigation and study requires a multi- and inter-disciplinary approach as well as the cooperation of specialists from many nations of the world.

In my paper for the World Congress on Reading at Vienna, Austria in 1974 (Downing, in press), I have reviewed the progress which has been made towards these four major goals of comparative reading. Advances have been made in pursuing the first three aims, but least progress can be discerned toward objective number 4. A few college courses have appeared with the title 'Comparative reading', but much more needs to be done to release the study of reading from the narrow prison created by nationalism, ethnocentrism and linguacentrism.

This present international seminar takes us a few steps along the way to understanding the processes of reading and learning to read through their reflections in contrasting languages and cultures. We shall begin with language. First, Makita-san offers us the marked contrast between the Japanese and English ways of writing. The Japanese system is based on an entirely different analysis of speech, and Matika-san's discussion gives us valuable insight into the nature of the processes of reading and learning this skill. The paper by Robert and Susanne Shafer moves us into the related field of dialect differences within a single language. They compare two languages, English and German, and show that in both, dialect is a very important problem in the teaching of reading.

The seminar then moves more into the realm of culture, though of course language is inextricably involved. Taiwo's paper and Susanne Shafer's second article are concerned with the cultural content of children's reading books. Taiwo studies the question — how relevant are the contents of school reading books to the children's own life experiences in Nigeria? Shafer compares the contents of children's reading books in Germany, both the western Federal Republic and the Democratic Republic in the east. Her special interest is in the way in which the female role is portrayed in such textbooks. Sex role is the theme of two other papers in this seminar. Dwyer reviews and examines critically the alternative theories and research on them to explain differences in the reading attainments of boys and girls. Her discussion is followed by the report of an experiment which Johnson conducted in four countries — Canada, England, Nigeria and the United States. He used the same reading test in all four countries to find out who read better, boys or girls, and is the result the same in all these places?

Finally, this international seminar does some selfexamination or homework. Two articles look at how comparative reading research and international development can be improved in the future. Ruthman provides a guide to the way in which scholars can obtain a wealth of information about a country's reading from published reports and works of reference.

The example he takes is reading instruction in the schools of France. Boucherant's article is an account of the problems being encountered in developing international channels for improving reading instruction throughout the world. It contains valuable suggestions for increasing the efficiency of these international efforts.

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30 Dyslexia and orthography

Kiyoshi Makita

Do different ways of writing a language need different psychological processes to be used in reading them? Some possible answers from Japan.

Introduction

Being asked to present this impressive sounding article on 'Dyslexia and orthography', the author does not have the slightest intention of bringing out any fancy or novel theory on reading difficulty and allied matters. The article here aims at first reporting the rarity of reading disability in Japanese children and second, the introduction of the Japanese script system, in particular compared to the script systems of the western countries based on the alphabet, which serves as a clue to explain the rarity of dyslexia in Japan and also to suggest a reason of its abundancy in other parts of the world.

The rarity of reading disability in Japanese children

The first part will not be elaborated here, the present author reported fully upon this in 1968. Fortunately the article received an unexpected reaction from international correspondents. Perhaps it might have been that it was the first piece of work on dyslexic problems based on experiences of a decoding system other than the Roman alphabet which aroused the curiosity of readers. A brief synopsis of that study follows. While dyslexia, reading disability, reading difficulty, reading retardation or whatever you prefer to call it, comprises a formidable portion of child psychiatric practice in the western countries, its incidence in Japan is so rare that specialists in Japan do not get any referrals. In fact, none has been brought to this author since he started a children's psychiatric service in 1958.

A questionnaire survey was conducted by this author asking school teachers to report pupils who had reading difficulties. 247 teachers out of 325 surveyed gave replies which covered almost 10,000 school children. The postulated result was that only 0.98 per cent of the surveyed population of children had reading difficulties of varying degree. This is an extremely small incidence when compared to that reported in western countries (Bach 1945, Weinschenk 1965, Schenk-Danzinger 1961, Monroe 1932).

The report was critically opposed by Critchley (1970) in this country.

He wrote:

> The alleged low incidence of reading disabilities in Japan deserves comment. Makita's suggestion that it is due to the inherent linguistic merits of the Japanese language is not plausible. The most probable explanation is that in Japan teachers, neurologists and educational psychologists are not alive to the possible occurrence of dyslexia.

They are alive! Moreover, they are in search for dyslexic children, but the plain fact is that such Japanese specialists do not get any referrals.

There are various theories attempting to explain the aetiology of reading disability from hereditary, morphological, physiological, emotional and other standpoints. None serve as a clearcut explanation as yet and none indicate that the Japanese differ from other human beings in the causal situation of producing reading difficulty *per se*. What, then, can be the contributing factor which results in such a big discrepancy in the incidence of reading disability in Japan as compared with other countries?

It is hardly possible to assume that the Japanese are ten times better at reading than other races. It is noticeable that studies on reading difficulty conducted in western countries so far have been based on the alphabetic language as given, and that the nature or characteristics of the language and its script system, the very object of the reading behaviour, have seldom been questioned. If the similarity of biological function of all races is taken into consideration, the discrepancy of the incidence may arise from the languages and their script systems *which are fundamentally different*. The 'comparative reading' project under the leadership of Downing (1973 a) is really an icebreaking and rewarding attempt in elucidating differences in the characteristics of languages and their script systems which doubtlessly will augment other valuable advance in our knowledge of reading capacity and disability. Hopefully, it may help to explain the discrepancy between the incidence of reading problems in Japan and other countries.

A brief introduction of Japanese script systems

Most Japanese writing consists in a combination of two decoding systems:

1 of morphemes called *kanji* and
2 of syllables called *kana*.

The *kana* system is comprized of forty-eight syllable characters each of which represents the sound of either a consonant plus a vowel or of a single vowel only. Each character is always read in the same way without irregularity. The Japanese *kana* script is similar to the alphabetical scripts in the sense that it represents phonological elements of language. The important difference is that *kana* characters represent a different unit of sound — the syllable. The *kana* script has two varieties which are called *hiragana* and *katakana* which are more or less comparable to print and cursive writing, but the discussion need go no further into their differences since the mode of their cognition does not differ. In consequence, the script phonetic relationship is quite stable in Japanese *kana* whereas it is often unstable in alphabetical languages. Thus, the Japanese *kana* system seems likely to cause less cognitive confusion in the initial learning stage.

Each *kanji*, on the other hand, represents a morpheme. The *kanji* system was derived from Chinese characters but it is read in a different manner from the way it is read in China. Many *kanji* have hieroglyphic or pictographic origins and, in general, it could be said that a *kanji* character is a logograph or an ideograph. One *kanji* may be read usually two or more ways but it nevertheless usually conveys a consistent meaning. A *kanji* may represent a monosyllabic to a multisyllabic pronunciation according to how it is used in combination with other *kanji* or *kana*, but the meaning it conveys is the same. In other words, a *kanji*, at a glance, conveys the meaning it represents to the cerebral cortex without any sort of decoding or spelling out process and its reading comes out secondarily, depending on how it is used.

There are vast numbers of *kanji* characters which seem endless to memorize. In China, it is said that a minimum of 3,000 characters have to be learned before one can be reasonably literate. It may require an even larger number of characters to reach the level of 'full literate proficiency' according to Goody (1968). The situation would be quite similar in Japanese as far as *kanji* are concerned. In consideration of such an inconvenience, the minimum requirement in learning *kanji* is limited to 1,850 characters for daily use and difficult characters are supplemented by *kana* in their place. And yet, it must be a heavy burden for Japanese children to have to memorize such a vast number of characters when compared to the learning of, say, the 26 letters of the English alphabet. However, merely learning these 26 alphabetic letters does not accomplish literacy. Various redundant difficulties are involved in learning to read in alphabetic languages, and this is particularly so in English. As Leong (1973) has noted, the difficulties of learning to read *kanji* assumed by western researches are overestimated and the burden of memorizing *kanji* can be much less than Goody (1968) or Halle (1968) suggest. Of course, there are some quite confusing symbols in *kanji* as well as in *kana* and also in alphabetic words. These are seemingly alike but different *kanji* in their total figure of Gestalt. But most *kanji* have some sort of regularity in their systematic parts. *Kanji* can be analysed into smaller units or radicals that operate often systematically. Certain radicals imply metallic, vegetative, animal or human nature and so forth. Many symbols are constructed from the combination of such units or radicals, which makes the learning of *kanji* more or less systematic so that the memorization of *kanji* cannot be compared to the rote memory of telephone numbers or of all the pictorial or abstract figures existing everywhere as claimed by such writers as Halle and Goody.

Although the total figure of a *kanji* is directly connected with the meaning it represents, the process includes a function of discriminating its partial details. The discrimination of seemingly alike but ambiguous symbols is accomplished by the differentiation of partial details of each individual symbol. Misreading due to an erroneous total perception induced by the failure of discriminating partial details may be compared to such a misreading between *straight* and *steady* or in *left* and *felt* in English. Misreading of *kanji* differs from that of alphabetical words in that the former does not include the spelling factors.

The difference of mode of cognition between reading alphabetic, *kana* and *kanji* scripts

On the basis of the aforementioned characteristics of the Japanese script system, the difference in the mode of perception and cognition of reading Japanese and of reading alphabetic languages may now be discussed at this point. Alphabets are phonemic codes and the reading of an alphabetic word is induced from the linkage of the phonemes which compound the word, which by way of the step of the spoken word, finally leads to its comprehension. In other words, unless one perceives each visual symbol for a phoneme correctly, and unless one connects those visual code symbols one by one (the decoding process), one cannot realize the sounds of the word these code symbols represent and cannot arrive at the comprehension of the word represented. The mode of cognition in *kana* reading is quite similar, but here the codes are not phonemic but syllabic which is more consistent and stable in its sound to visual symbol coding relationship.

Being a morphemic code, the comprehension of *kanji* is entirely different in its cognitive procedure. In reading *kanji*, visual perception of a symbol can carry the meaning it represents at sight no matter how it is read. The visually perceived symbol is transmitted to the higher cerebral centre of comprehension directly, not by way of the realization of a spoken word, and different readings of the perceived visual symbol emerge secondarily dependent on how it is used on the basis of the comprehension of the meaning it represents. In other words, the mode of perception, transmission and comprehension is the other way round in the reading of *kanji* compared to that of *kana* or the letters of an alphabet. It is usually agreed in Japan that the capacity for reading *kanji* remains more unaffected than that of *kana* in cases of acquired alexic/dyslexic disorders derived from cerebral lesions. This fact may imply that the cognitive process is very different in reading *kana* and *kanji*.

Another comment might be added here. As was mentioned earlier in this paper, most Japanese writings employ a mixture of *kanji* and *kana* scripts which it is claimed makes reading easier. The reason is said to be that the *kanji* logographs play the role of milestones in a sentence facilitating an overall comprehension orientation. This seems true on an empirical basis, for reading Japanese telegram messages is commonly recognized as being quite difficult and often misleading, because Japanese telegrams use *kana* script only for technical reasons. There has long been a Kana Script Movement in Japan which aims at reforming Japanese, writing in *kana* script only for the sake of its technical simplicity. The very unsuccessful development of this movement so far may be due to the abovementioned disadvantage and may serve to support the advantage of mixed *kana*/*kanji* writing.

Cognitive confusion and dyslexia

In agreement with Vernon (1957) and Downing (1973 b), this author concludes that the fundamental and basic characteristic of reading disability appears to be much dependent on cognitive confusion. The writing system seems to be a very important variable in the process of learning to read. The rarity of reading disability in Japanese children might be because of the Japanese writing system which, though it superficially may appear to be extremely complex, is, in reality, less confusing in its cognition. In particular, the different mode of perception of *kanji* has to be taken into consideration. These points may serve as some clues in understanding reading difficulties in other languages. Although it is very difficult to prove the Japanese writing system to be less confusing compared to other writing systems, the discrepancy in the incidence of reading disability between Japan and many western countries may imply that the Japanese writing system is less confusing in its cognition for two reasons:

1 because of the sound to visual symbol consistency of *kana*
2 because of the entirely different perceptual process of reading *kanji*.

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31 Teacher attitudes towards children's language in West Germany and England

Robert E. Shafer and Susanne M. Shafer

Language: dialect in both English and German — an important problem in reading.

Introduction

The language attitude study presented here is part of a larger investigation began in 1972 and still underway, concerned with the teaching of the mothertongue in England and West Germany. During the course of this investigation it became evident that teacher attitudes toward child language were to be an important aspect of the larger study. Since teachers' attitudes toward their students constitute a major force in the development of the education of those students, the emergence of the language attitudes of teachers as an important aspect of mothertongue teaching in any country can hardly be surprising.

Educational researchers in countries other than their own, studying educational systems, always risk (notwithstanding their fluency in the language of the country being studied) misinterpretations of culture, social class, school practices, and teacher attitudes. A number of consultants from England, West Germany and the United States and other countries have given us advice and counsel on problems related to the above areas. Nonetheless, misinterpretations may have been made in any area and we, as principal investigators, take full responsibility for all such misinterpretations. Research carried on in schools involving school observation of classes, interviews with busy teachers and school administrators is always difficult in any country. Without the full cooperation of the teachers and school administrators and consultants mentioned in both countries who gave and continue to give freely of their time and energy, this study would not exist. The fact that it does exist is a testimony to the professional spirit of those who assisted us. It also demonstrates their desire to shed light on what continues to be one of the most pressing problems facing all educational systems engaged in the process of teaching the mothertongue. How may it best be done? We also acknowledge a debt to our students and colleagues in comparative education and applied linguistics, whose constructive criticisms continue to provide encouragement.

Background

The school systems of most modern industrial nations spend large amounts of energy and resources on the teaching of the mothertongue. Both England and West Germany are examples of countries with well established practices in teaching the mothertongue. In both England and West Germany movements for educational reform and change are underway. At the same time, in both countries, growth of knowledge and development of linguistic studies, including sociolinguistics and psycholinguistics, have become to some extent incorporated into university programs and isolated attempts are being made to apply linguistic studies to the solution of particular problems in education and in educational planning in general. Such work proceeds with some difficulty because of the lack of personnel, e.g. a number of chairs of linguistics are not filled in several German universities and in British universities as well. In teacher training colleges in both countries the number of personnel with backgrounds in psycholinguistics and sociolinguistics are lacking although there are encouraging signs that the situation is being rectified. At Oxford University, for example, there are now several tutors in linguistics.

The problem in both countries seems to be of several dimensions:

1 To what extent is knowledge developed in the areas of sociolinguistics, psycholinguistics and applied linguistics being applied to educational problems?
2 How can trained personnel be placed in positions where they can be effective?
3 How can further research development in this area be developed?

There seems to be evidence that linguists feel that there is sufficient knowledge which can be applied to educational problems and to develop educational planning for the future. The situation has given rise to a 'new breed' of persons in both West Germany and England as well as other countries who are attempting to build bridges between linguistics and education and to apply linguistics and linguistic insights to educational problems. This is the concern in large measure of the investigators in this study who continue to be involved with the applications of educational research to the solution of practical problems of classroom teachers as well as the conduct of future research. In the largest sense, this study is dedicated to all who teach the mothertongue.

The organization of schooling in West Germany and England

Primary education in England and West Germany may have had different origins, but today the two systems resemble one another in many ways. While British primary schools started through private initiative, German elementary schools began at the behest of state governments as public institutions. Both were intended to make the masses literate, to pass Christian principles on to their children and to ensure each new generations' docility before God and secular authority. In Germany, thanks to Luther's influence, the *Volksschule* was established as early as the 16th century. British primary education began to be accepted as a state responsibility only in 1870.

One hundred years later the lower segment of the *Volksschule*, the *Grundschule*, age six to ten years, was attended by every West German child virtually regardless of socioeconomic class. The school is usually within walking distance of home. The teachers are graduates of a three-year teacher's college, an institution now largely attended by women.

In Britain, primary age boys and girls together also attend a neighbourhood school. Their teachers are usually the products of a three-year teacher training college, a less prestigious institution than a British university. As five year olds, English children enter the infant school; at seven they move to the junior school where they remain until they are eleven years of age. If any British pupil expects to attend an independent school, he tends to leave the state system only after completion of the primary school. Only some upper class children transfer at age eight to a private preparatory school. Fewer than 4 per cent of British primary pupils were in independent schools in 1972.

In many ways British and West German children experience a different elementary education. The fact that West German pupils often have the same teacher and the same classmates for four years of the *Grundschule* may compensate for their schools being larger than many British primary schools. One half of the latter in 1970 contained 100 pupils or less (Corbett 1973). The utilization of 'family grouping' in England means that a class of thirty to thirty-five may contain a range of children of various ages. At the end of an academic year only a portion of the pupils transfer to the next higher level while an approximately equal number of younger children move up to take their places. Through family grouping a teacher is able to observe a pupil's growth and to enhance it during the pupil's two or three year stay in that teacher's classroom. The fact that teachers in the schools of both countries generally have the opportunity to observe children's language over a period of several years was considered a significant criterion for the selection of these educational systems.

There seems to be considerable agreement among observers that many British primary schools are more pupil centred than are the West German *Grundschule*. In the latter, the teacher directs explanations and questions to his or her pupils and solicits responses from them. With rare exception, everyone engages in the same learning activity at the same time. In many British primary schools pupil learning has developed in a quite different way. Although the investigators in this study found mostly teacher directed activities in West German primary and secondary schools, the converse was true in England where most teachers tended to encourage individual and group learning activities, pupil's selfdirected active learning, a selection of topics for study drawn from the pupils' environment and experience and the integration of subjects. Team teaching and combining two or three classrooms are used to expand the flexibility of learning arrangements in many British primary and secondary schools.

Whether he accepts the philosophy of the open classroom or not, the British teacher has considerable latitude in the curriculum he develops with or for his pupils. Neither the national government nor the local education authority draws up any specifications. In contrast, the West German teacher, although he has considerable freedom within his own classroom, is asked to follow the curriculum guidelines issued by his state's Ministry of Education and Culture. By no means a restrictive document, it nevertheless indicates what subjects and topics he should deal with in his classroom and what the goals of instruction for particular subjects ought to be.

A check on the breadth of curriculum selected by British teachers is provided by the headmaster or headmistress of the primary school. This person in most schools has continuous contact with teachers, pupils and parents. For example, the head usually talks with each parent who first brings his five year old to enter an infant class. The 'head' moves around the school freely and makes it a point to have pupils read to him sometime during the week. He or she tries to facilitate learning activities in the school. Headmistresses and headmasters see their teachers in the staffroom during the morning coffee break, immediately after the noonday dinner, as well as at tea in the afternoon. In more than ten years of observing West German elementary schools, these investigators have found that with some notable exceptions, few West German *Grundschule* principals grow that familiar with their children and staff.

The schools, teachers and social settings

No statistically representative sample was formally developed for this paper. Nevertheless, the schools where data was collected in both countries include a significant cross-section of British and West German schools and communities. There were twenty-one schools in England and ten schools in West Germany which constituted the sample of schools. Twenty-seven teachers in infant schools and six teachers in junior schools were interviewed in England and eleven teachers in primary schools and twenty teachers in secondary schools were interviewed in West Germany. In the case of both primary and secondary schools, the schools were chosen in each country on the recommendation of officials in the ministries of culture and education in West Germany as well as other consultants familiar with West German education. In England, advisers from local school authorities, HMIs or university personnel in teacher education programmes who were familiar with the schools and were serving as consultants for the study all recommended schools in England. Since interviews were held with consultants who were in teacher education, linguistics and applied linguistics in both West Germany and England, the names of schools and school personnel were continually coming up.

Procedures

In each case, the school was visited for a period of at least one day by members of the research team. Usually administrators were interviewed as well as the teachers who had indicated that they were interested in participating in the project. Ordinarily the teachers were also asked whether or not they would object to having their classes observed and the classes of all teachers interviewed were observed. An interview schedule was developed, field tested and eventually used in conducting the interviews (Appendix). The interviews were recorded and later analyzed for significant trends. Since this paper is part of a larger forthcoming study concerning the teaching of the mothertongue in England and West Germany, only parts of the total study which concern questions eliciting language attitudes are being reported on at this time.

A note on social class

In both England and West Germany both schools and language are inextricably bound up with the social structure as in other countries. The many references of teachers to social class occurring in the data support this observation. The subject of social class, language and education is now a major study in both countries. In England the working-class still differentiates itself through type of employment rather than income. Rather tightly knit family relationships extending to three generations, especially for the women, for men membership in trade unions and the Labour Party, and attendance at the secondary modern school or perhaps today, the local comprehensive school are class makers. Only rarely do the children of working-class families attempt admission to the grammar school, for a minimum of compulsory education is thought sufficient. The middle class, on the other hand, urge the children to do well in school, to enter a grammar school, and to pass o level examinations and then even [illegible] level examinations which are the only route to university admission as is the completion of the *Abitur* in West Germany.

In England as elsewhere housing is often a mark of social class. Parts of many major cities in both countries are well known as working-class areas. In England, even in newer neighbourhoods, that label may be attached when one is talking about so called council estates. These areas are public housing developments for low income families. In contrast to such housing in the United States, they are not restricted to families at the poverty level but rather serve also the lower middle-class. As such they become a popularly agreed upon standard for identifying residents of council estates with the working class rather than the middle class.

In West Germany the affluence brought up by the post-war economic miracle has reduced social class to a considerable extent. Class differences had already been reduced by the drastic changes produced by the second world war, e.g. population dislocation and the destruction of many of Germany's working class neighbourhoods by bombing in the inner cities near railroad yards and factories. To this day nearly three million foreign workers constitute West Germany's lowest social class, a Lumpen proletariat, with almost a caste status. West Germans consider themselves a cut above the foreign workers no matter what their earnings or education. Because of the transitory ties of foreign workers to Germany, the adjustment of their children to school continues to be a problem for West German educators.

As in England, West German social classes are distinguished to some extent by the jobs they hold. The working class is marked by their limited earnings, by the membership in trade unions, their support of the Social Democratic Party, and the education, terminated usually with the completion of the *Hauptschule*. Children of working-class parents make up only 10 per cent of sixteen year olds in the *Gymnasium*, the academic secondary school, and only 6.4 per cent of the eighteen year olds are in that school (Radcliffe 1972). At universities 95 per cent of the students are of middle-class origins. Civil servants, in particular, who constitute only 6 per cent of the total working force produce more than one-third of the university population (Radcliffe 1972).

What teachers say about children's language: West Germany and England

As in Labov's (1970) study, an attempt was made to determine the language attitudes of teachers in selected schools in West Germany and England. As in Labov's investigation, a goal was to ascertain whether or not the informant approves or disapproves of the speech, how he or she compares it with other social and/or regional dialects, how he or she feels about correctness and the need to change the language. Also, in the case of Labov's informants, an attempt was made to assess emotional attitudes as well as cognitive statements.

Most of these attitudes may be seen as reflecting the teachers' concerns about the speech problems the children brought to school and their estimated causes of these problems. In many cases, the teachers also indicated, as did Labov's informants, ways in which they felt the children should attempt to change their language or ways in which they felt the school could work to develop their language and reading abilities. In the majority of cases in both countries the teachers described the language of the children coming into the primary school as being deficient in some way. Many comments were also made about both regional and social dialect, about paralinguistic behaviour and about the complexity of language and about language skills which students do or do not possess when they first enter school. As to the reasons for causes of language behaviour, teachers mentioned such elements as lack of communication with the parents, the education of parents, the language of parents, the social class of parents, the neglect of children, a general fear of being corrected because of reasons of dialect, the general impotency of the school with respect to the ability to develop language and reading abilities in many pupils, the influence of parents and of peer groups and of general intelligence factors.

Why teachers think children speak as they do

More than 90 per cent of teachers in this study answered a free-response question requesting them to describe children's language in terms which made it apparent that in their perception the language of children in their school was deficient in one way or another. The teachers went on to express attitudes as to why they felt such deficiencies existed. In both countries the attitudes expressed concerned the influences of home, family, and of the social and regional dialects of the larger speech community as apparent causes of linguistic deficiencies and problems. In other statements (not reported in this paper) they described in detail what measures they themselves are taking in order to compensate for what they perceive to be deficiencies in language and reading.

Family influences

Most of the teachers mentioned home and family influences as being extremely significant in developing the kinds of language which children bring to school. In many cases, they coupled their descriptions of family with a description of that family's place in the social structure, and in almost all the cases discussed, the influence of family was considered to be negative with respect to working-class parents or homes and positive with respect to upper-class homes.

Social and regional dialects

The comments here are typical of both the comments made by the majority of the German teachers and British teachers when discussing the influence of family and community as representative of social structure. There were, however, some notable differences with respect to the two countries regarding social and regional dialects, e.g. in England regional dialect is always detectable and operates in some instances as social dialects and the influence of social dialect is very strong. In the Federal Republic of Germany, the regional dialects are immediately detectable, but often less operative as social dialects. The following comments of teachers are representative:

> German teacher 3: 'Regional dialects including *Plattdeutsch* which do not differentiate between *mir* and *mich* are noticeable among the children who come to this school.'
>
> German teacher 4: 'Because of dialect many children fear to speak out when they first come to school.'
>
> German teacher 5: 'In many cases, the classes which are made up of more of the rural population tend to have children with smaller vocabularies and are not as fluent as classes made up of children from Mainz (the central city). The rural children are more in need of thorough language instruction and even children from Bingen are less

skilled in language and, for example, at Ludwigshafen they still allow the Palatinate dialect in their classes.'

German teacher 10: 'The fifth grade children of rural areas come here speaking a regional dialect. They are bright and expecially eager to adapt themselves and become like city children and most of them eventually do so.'

British teacher 1: 'There is currently a difference of accent between the working-class children and the middle-class children. The teacher draws two circles which intersect and overlap. The overlapping part of each of these circles would be the part where a group of working-class children who are almost in the middle-class can communicate about on the level with middle-class children when they come into school, otherwise if they are in this other part of this working-class circle they have considerable difficulty in understanding middle-class children and in particular understanding the teacher.'

British teacher 3: 'We have some working-class children in this school who use working-class language. Some parents object to use of this language in the school since they have moved into the middle-class . . . There are some children who come in from rural areas and working-class homes and their home language is very different from the school language. I can tell both their regional dialects and also whether they come from rural areas or whether they are middle-class children who live around here on a middle-class estate. Some children will be using the social dialect of a particular village and what they said about their play would fit with their class or community background. I am able to assess this pretty well by now with respect to the children who come to this school . . . In this village, accent is a problem since children adopt the local dialect while at school but the middle-class children can switch to a different language at home or at school more easily than the working-class children can . . . We have a young lad here from Yorkshire who is easily identifiable as speaking a different dialect than the local dialect around here (Devon).'

British teacher 5: 'Their language will always give them away insofar as class is concerned. For example, a middle-class child will say "After school I went to the shop" and a working-class child will say "After school I went up the shop". Also the children who live on the council estates have a definite common language which is immediately evident when they come to school. For example, they all have the same synonym for lavatory. This will not be the case with the children who are not from the council estates.'

British teacher 6: 'As an example of working-class language, I remember the boy who came in one day and said, "How do you spell gunner?" I asked him how he would use it in a sentence and he said "I am gunner go to Scotland." '

British teacher 7: 'If they are speaking the standard Yorkshire dialect they will say /bus/ instead of /buus/ and it will mean that they have probably moved in from somewhere else.'

The Bernstein 'syndrome' and teacher-language attitudes

In the short space allotted here it is impossible to discuss the many influences that the work of Basil Bernstein has had upon this particular research study. Time and time again in the course of the study, teachers in both West Germany and England would support their descriptions of the linguistic deficiencies of the children they were describing by saying, 'As Bernstein has pointed out, these children use a "restricted code".' Bernstein first used the term 'restricted code' in his essay, 'Linguistic Codes, Hesitation Phenomena And Intelligence' (Bernstein 1962). He had earlier characterized the 'restricted code' as 'public language' and had referred to it as having '. . . short, grammatically simple, often unfinished sentences, a poor syntactical construction with the verbal forms stressing the active mood . . . and repetitive use of conjunctions.' 'Public language', in part described above, was supposedly used by the 'unskilled and semi-skilled strata', but approximations to a public language may well be spoken '. . . in such widely separated groups as criminal subcultures, rural groups, armed forces and adolescent groups in particular situations' (Bernstein 1959). The tragedy of this elaboration of so called restricted codes and elaborated codes with their carefully worked out connections to English social structure is the ultimate effect that they seem to have had on the language attitudes of many teachers. That this was the case in England is unquestionably true from the data in this study, and that it is also the case in West Germany was found to be true. This appears to be due in part to the work of Ulrich Oevermann (Institute for Social Research, University of Frankfurt M) and Max-Planck (Institut for Educational Research, West Berlin) whose work *Sprache Und Soziale Herkunft* (1972), which although intended to be critical in some respects of Bernstein's description of codes, nevertheless tended to apparently implant the idea of the existence of 'restricted codes' and 'elaborated codes' in the minds of many West German teachers, linguists and sociolinguists. It seems clear that the simple fact of describing the codes actually misled a number of people who may or may not have been all too willing to be misled. Benjamin Bloom (1965) for example, took the definition of 'restricted' and 'elaborated' codes to mean linguistic deficiency. This misinterpretation became the American definition of educational deprivation. Many American programs of compensatory education were developed on this basis. Both Oevermann and Bernstein in an unpublished paper, 'A brief account of the theory of codes' (University of London, Institute of Education, August 1972) have denied that it was their intention to create a language attitude in the minds of many teachers which tended to reinforce the idea that those children who come from working-class families speak a restricted code and are therefore linguistically deficient. Bernstein (1972), in responding to a specific criticism of Labov on this point, notes, 'It is a travesty to relate the concepts of elaborated or restricted codes to superficial stylistics of middle-class and working-class forms of conventional behaviour, as implied by Labov (1970).' Bernstein further notes:

> I have never been concerned with what Labov and others call the superficial stylistics of middle-class speech. *Indeed, if I had been concerned with the relative presence or absence of such niceties of conversation, why did not Lawton or myself in the early research count such deviations from standard speech?* It would not have been difficult! I certainly would not wish to defend those created in those two lists, but I would resolutely oppose the view that the distinction between the two forms of communication rested upon, or necessarily pointed to the difference between "standard" or "non-standard" speech. Indeed, even the relationship between codes and social class was seen as contingent (1962).

As Bernstein points out in the same paper, his research took a different trend between 1961 and 1966. He has apparently gone to a considerable effort to rebut the criticisms of Labov and others pointing out confusions between British and American interpretations of each others' social class structure and the relationships of linguistic codes to the various social structures. Despite the many times that Bernstein has made such comments in print and elsewhere as, 'Clearly one code is not better than another, each possesses its own aesthetic possibilities' the fact remains that among many of the teachers interviewed in this study in both West Germany and England, the term 'restricted code' meant a linguistic deficiency determined by one's place in the social class structure and for them it represented more or less a self fulfilling prophecy. Since such misinterpretations have come to pass in England and West Germany and in the United States, it is no doubt that they have come to pass in other countries — and given the 1972 reflections on the matter by both Bernstein and Oevermann cited above, a considerable amount of inservice education work will be necessary in order to clarify the language attitudes of teachers.

Clearly Bernstein and Oevermann cannot alone bear the burden of a lack of linguistic education on the part of a generation of teachers. The type of linguistic education the teachers should have had might have given them enough of a perspective not to accept an obviously oversimplified view of the complex matter of language, code and class.

Summary and conclusions

This study is an attempt to combine the methods of sociolinguistic research with those of comparative education to study the language attitudes of teachers in two countries with the larger purposes of gaining insights into the teaching and learning of the mothertongue. A key conclusion of this study is that teachers have language attitudes and that these attitudes about the language of the children they teach are firmly held. Analysis of interviews with teachers in both West Germany and England reveal that the language attitudes of more than 90 per cent of a selected group of sixty-four teachers in West Germany and England reveal clusters of teacher attitudes toward the speech of working-class and middle-class children. These attitudes generally link language deficiency with the language of working-class children and reflect approval of the language of middle-class children. Another conclusion of the study establishes that such language attitudes may result in a self fulfilling prophecy in the minds of many teachers which affects their judgments of children from all classes. These children from the working-class, the teacher proposes, come to school with a language which is already deficient and therefore constitute a burden to many teachers who already feel themselves overburdened with large numbers of students in their classes. These basic language deficiencies, they feel, may even be associated with genetic factors. Most teachers feel the causes of language deficiency are products of strong environmental influences and that the school and any teacher in particular can do very little about those aspects of environment which they regard as causing language deficiencies.

To what extent the presence of stereotypic language attitudes on the part of teachers in any country toward the language of their children affects their teaching of those children positively or negatively is a question for further research. It is also clear from this study that the early work of Basil Bernstein has apparently been misinterpreted by teachers in both England and West Germany as reinforcing a relationship between social class and language deficiency which Bernstein now maintains he never intended to suggest. That such similar clusters of language attitudes exist in the United States and result in the stereotyping of the speech of ethnic minorities in particular has been clearly demonstrated by the work of Williams (1973). It would seem that if teachers form attitudes about children's language these attitudes are both persistent and pervasive. They apparently affect teachers' estimates of the child's intelligence and general learning potential. The conclusions of this study would seem to point also to a need for further research as to the effects of the language attitudes of teachers on instruction generally in a number of countries and also to detect the full range and dimensionality of the language attitudes of teachers. The conclusions also certainly suggest that more attention be given to specific techniques for the measurement and diagnosis of the language abilities of children when they enter school so that the full potential of their abilities to learn and develop language and reading can be made known to their teachers.

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Interviews with teachers

1 What do you consider to be the most important reasons for the development of language power?

2 What have you observed in your pupils about the development of their language power?

3 What do you consider to be the most important classroom activities to develop language power?

4 From your observations, what relationship seems to exist between the development of oral language ability and reading and writing?

5 What teaching materials do you consider most effective in the development of language power?

6 How do you evaluate progress?

7 What did you learn about developing children's language in your initial preparation to teach or subsequently? To what extent have you been able to use effectively in the classroom what you did learn?

32 Cultural relevance of reading materials

Oladele Taiwo

Culture: Children's reading books and their home life experiences — do they fit? A Nigerian Study

Background

This paper embodies the tentative results of a research being conducted in the Lagos State of Nigeria. The work is sponsored by the University of Lagos, and the aim is to investigate the cultural relevance of the literature programmes in forms one to three in selected secondary schools in the Lagos State with the aim of finding out:

1 how this correlates with the Programmes in forms four and five when setbooks are prescribed by an external body, the West African Examinations Council
2 to what extent any lack of cultural relevance poses a methodological problem.

This is a multipurpose research, the final outcome of which will not be known for some time. Fortunately, the work has reached such an advanced stage that certain relevant facts have emerged. This paper will touch only on matters about which one can speak with confidence at this stage.

Procedure

It has been necessary to undertake an intensive study of the literature programmes of various secondary schools in Lagos, compare these with some programmes in other parts of Nigeria, interview teachers and school administrators and administer questionnaires. Each of these steps has helped to provide the necessary information on which this analysis is based. The questionnaire has, however, proved to be the most helpful instrument. This comprehensive instrument, divided into two parts, seeks to collect as much information as possible on all aspects of the reading programme of a particular school. Of the eighty-five schools served with the questionnaire, eighty have made adequate returns, which is no mean achievement in the Nigerian situation. It has been possible in this case because of the frequent visits to schools by research assistants specially appointed to redeem the questionnaires and conduct preliminary interviews.

The questionnaire

The questionnaire seeks general information about the school in Part A and devotes Part B to detailed questions about the Literature Programme. Part A deals with factors which are known to influence the choice of books and therefore directly the attitude to reading as an important literary activity, e.g. location, kind, size and age of school; whether the bias is for arts or science; whether the school is churchrelated, private or government. The responses received to these questions have been useful in the way they help to determine what significance should be attached to the answers to relevant questions in Part B. Some of the questions in Part B are reproduced below with an analysis of the answers to them in each case in order to show how illuminating the whole exercise has been.

1. From what class do you start to read literature books?
   All schools start in form one.
2. What importance is attached to literature in the total English programme? e.g. two lessons out of a total of six; 30 per cent of the total English marks, etc.
   Overall average is 40 per cent of total English time and marks.
3. How many books a year on the average did the present form three pupils read in class in forms one and two?
   Overall average is four for each year.
4. Please give below the list of books the present form three pupils read in class in form one. The same type of question is asked for forms two and three.
   Usually a list of three to six books is given for each year. These are mainly prose fiction, written by both Africans and nonAfricans.
5. Does your literature programme place heavy emphasis on any particular literary form? (Prose, drama or poetry)
   No particular emphasis: 74 out of 80; emphasis on prose: 6.
6. Which literary form would you teach first to form one pupils and why?
   Prose, in all cases. Some typical reasons are:
   1. 'It is easier to teach to the young ones since most of them would have been used to reading story books. They normally find story books interesting and easy to read.'
   2. 'It is easier for the students to understand, and with interest the appetite for further reading is generated. This foundation enables the students to learn the art of writing in the English language and to appreciate literary work as found in drama and poetry.'
7. Which literary form would you teach last to form one pupils and why?
   Drama in forty-six cases and poetry in thirty-four. Some of the reasons given are interesting:

1 'Drama combines the other two aspects of literature — prose and poetry. Plays generally tell stories and are often written in poetic form. This is why some plays like *Henry V* are said to be not only history plays but also epic plays. For this reason I should advise that drama be read last among the three.'

2 'Although the young ones will find it interesting and amusing dramatising, they are still too immature to understand dramatic technicalities. They will tend to treat this subject on the face value without giving much thought to the intrinsic value of it.'

3 'I would like to teach poetry last. The knowledge of prose and drama can help lay the necessary foundation for thorough understanding and appreciation of the beauty of poetry.'

8 In your experience which of prose, drama, poetry do pupils like best in the lower forms? Why do you think this is so?
(Prose in all cases. Typical reason:
'Because of the difficulties in the understanding of drama and poetry, students in the lower classes understand prose best. Prose is just a long story similar in some cases to the interesting stories children have read earlier. Prose has no hidden meanings which require much strain to unfold.').

9 Do you find that your pupils prefer books written by African authors to those written by foreign authors?
Yes, in fifty-two cases, 'does not matter' in twenty-eight, 'children don't really mind the author provided the experiences they read about are familiar to them'.

10 Do you find that your pupils respond better in class to books written by African authors against African background?
Yes, in forty-one cases, 'it depends on the quality and content of such books' in thirty-nine.

11 Do books by foreign authors present any particular problems?
Yes, in all cases.

12 Which, in your opinion, is more important to the pupils for the understanding of a book — the authorship or the background against which the book is written?
The background against which the book is written, in all cases.

13 What percentage of your pupils usually offer literature for the School Certificate Examination?
Overall percentage is 79.

14 Your name and qualifications.
The teachers who signed the questionnaires are in sixty-two out of eighty cases professionally-qualified to teach English.

Cultural relevance

Considered from the point of view of the relevance to indigenous culture of reading materials, some of the findings here are of the utmost importance. To start with, the returns show no particular bias for books written by

Africans — the background against which a book is written rather than the authorship is considered the most important factor for the understanding of a book. Any writer, African or nonAfrican, who diligently exploits the African background in his writings, describes faithfully the customs, traditions, love and way of life of the people, and shows creative intelligence is likely to gain acceptance. African books are read not necessarily because they are written by Africans but because they describe experiences with which the reader is familiar. Cultural relevance, rather than the ethnic or racial origin of the author or even the quality of the work would therefore appear to be the deciding factor. The methodological problems which arise with books of foreign authors stem from the unfamiliar background against which they are written. Once the teacher takes the necessary steps to overcome this difficulty the children are known to derive enjoyment and benefit from their reading of these books. So reading in this case, as should be the case always, is used not only to integrate the child more firmly into his culture, but also to widen his horizon and improve his knowledge of other cultures.

The novel as an art form

But there are a few factors which tend to undermine the cultural value of the programmes investigated. The novel, to which both teachers and pupils pay so much attention, is the least indigenous of the art forms. In the way it has developed in its European homeland it poses many problems for the African. It is a highly literate form which only a few Nigerians can read and thoroughly understand and enjoy. As an imported form it has no direct equivalent in African art. The nearest thing to it is storytelling which, unfortunately, has had only a negative effect on the development of the novel in Nigeria. It has led writers to conceive of the novel as a story with a moral and to attempt to fulfil this expectation in their writings. That is why the unsuccessful Nigerian novel is usually packed full of sociological details which, even though interesting in themselves, have an existence independent of art. This natural inclination to storytelling has also created a situation in which there appears to be a lack of discrimination between stories which are well told and those which are not so well told — there is a tendency to take all novels equally seriously.

The novel form has yet another serious defect when it is employed in Nigeria as a means of propagating indigenous culture. In the European type of novel the individual is usually pitched against society and used to dramatize the strengths and weaknesses of his community. This is what, for example, Achebe does with Okonkwo in *Things Fall Apart*. If the African society places emphasis on the community rather than the individual, if the individual is expected to be fully integrated with the society rather than stand apart from it, how suitable is the novel form for expressing African sensibility?

The justification for allowing prose books to dominate the reading programme in schools, as is the case at present, may lie in the fact that, unlike drama and poetry, they provide copious practice materials for continuous reading. It may also be said that the Nigerian novelist has now always followed the example set by his European mentor. In works like *Danda* and *The Great Ponds* emphasis has shifted from individual values to those of the community as a whole. In *The Great Ponds* the individual is important only to the extent that he embodies the hopes and fears of the community. So completely is the individual relegated to the background that the reader's mind is concentrated all the time on the survival of common values and ideals. The novel has thus been occasionally used to provide the psychological climate in which the Nigerian works and seeks identification with his ancestors and an understanding of the supernatural. For in the Nigerian novel, as in the society itself, the supernatural plays an assigned role. In the words of Amadi (Vincent 1973):

> In the typical African society you find the so called supernatural plays a very vital role. The man in the village is enmeshed in his religion. He does not merely go to fish. There is a ritual in the fishing. He has gods of the sea, gods of the stream. The farmer does not just farm. There is a ritual to it. There is a god in the farm. The wrestler does not just wrestle. There is an emotional part of the wrestling. It is not just like, let us say, the Olympics for which you train for months, attain a level of perfection and then go and do what you can.

If in the future Nigerian novelists are able to carry over successfully in their works this emotional aspect of life, which is an integral part of African reality (although not always understood easily by others) they would have fully justified the attention being paid to them now in schools.

Drama and poetry

It is surprising that drama and poetry are given little attention and that in all cases these are considered more difficult to teach and understand than prose. For, from the standpoint of indigenous culture, these two forms are more relevant and integral to the life of the people than prose fiction. Poetry is part of life and is used for different personal, social, religious and political purposes. The songs and dirges of farmers, hunters, masons and fishermen are wellknown. The use of poetry for proclamation, incantation or invocation is so well established as an important aspect of life that even the child in the city becomes acquainted with it at one stage or another. The same point can be confidently made for drama. Nowhere is life more exciting and packed full with drama than in Africa and this is reflected in Nigerian plays. These points have been adequately summarized elsewhere (Taiwo 1967):

> Traditional life on the west coast of Africa lends itself to poetic expression. There are songs and incantations appropriate to every occasion, from marriages to funerals. The hunter in the bush, the

farmer on the farm sing songs for good cheer and to make the burden of work easier. Poetry and drama go hand in hand during festivals, when people have an opportunity for selfexpression. Poetry is the soul of festivals in the same way that dramatic action is the body.

One can only hope that in the interest of cultural relevance future programmes will give more prominence to drama and poetry in which children usually show keen interest at this stage. It is only by so doing that books can be made to compete effectively with the other public media which at present lay claim to their attention. Once children are helped to develop a permanent fascination for books and reading at an early age, they should benefit equally from their involvement with prose, drama and poetry.

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33 Comparative aspects of sex differences in reading

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Culture: Why do reading attainments of boys differ from those of girls? Some possible explanations.

The study of sex differences has long been embedded in the more general context of reading research. Historically, sex differences have most often been reported incidentally, mentioned almost in passing in reports of research on other reading topics. It has been only in the past ten years or so that the study of sex differences has begun to emerge as a topic worthy of scholarship in its own right, and a coherent theory of the origins of patterns of sex differences still remains to be developed.

My plan for this paper will be to summarize methodological problems in research on sex differences of reading, and to outline briefly some of the available sex difference data and the major theories that have been offered to explain them. I will also discuss an alternate explanation which may prove useful as a unifying concept for understanding the diverse body of sex difference research we now possess.

Methodological considerations

A considerable number of reports showing sex differences in literacy, reading achievement, and reading retardation in various countries are currently available. The number of truly crosscultural studies is much smaller, and taken together, the total picture presented by these reports is not a coherent one for many reasons. Observed patterns of sex differences, and even the direction of these differences, vary with differing research methodologies, measures and samples. Crosscultural studies of patterns of sex differences in reading are of course subject to the same problems of establishing comparability as are other areas of crosscultural research, but additional methodological problems involving differential definitions of sex role and their implications for research are also encountered.

In attempting to reconcile conflicting reports of reading sex differences, it becomes clear that certain research assumptions must be examined and definitions clarified.

First, what is meant by 'reading'? Literacy must be differentiated from literature, rates of reading failure must be differentiated from achievement test scores, and reading subskills such as letter recognition, paragraph

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comprehension and vocabulary must be differentiated from one another. Reports of apparent deviations from expected patterns of sex differences can too often be traced to lack of congruence between the researcher's implicit definition of reading and the actual measures she has employed to assess it.

Another serious problem encountered in attempting to compare sex differences across cultures is that of differential expectations for the reading ability and reading practices of males and females within a culture as well as between females of different cultures and between males of different cultures. Downing (1973) points out that, 'It cannot be taken for granted that universal literacy is either expected or even desired in all cultures'. This applied equally well to the question of sex differences: It cannot be taken for granted that literacy is equally expected or desired for males and females. When attempting to evaluate sex differences in any culture we must ask: How do expectations and desire for reading ability differ for females and males within this culture? Does this culture consider reading equally necessary or desirable for males and for females? Are there differences in level or type of reading activities considered desirable for females and for males? Differences in expectations may be due to a wide range of factors such as religious restrictions, economic considerations and culture specific sex role traditions. These differential expectations may help explain variations in performance within a single culture, but they also represent serious obstacles to establishing sample comparability between cultures since they may serve to institutionalize sex differentiated access to reading instruction and to other reading opportunities. Differences in expectation may also operate on a more subtle interpersonal level, influencing an individual's desire to achieve in an area that may or may not be culturally sanctioned for that individual's sex.

Incidence of sex differences

In the United States, sex differences in reading and other verbal abilities have been widely reported since the turn of the century. In studies comparing tested level of reading achievement the reported differences tend to be small, often not even reaching statistical significance, but their occurrence and direction is remarkably consistent: girls achieve higher scores on reading tests. The exception to this generalization is vocabulary measures where boys are consistently higher achievers. This pattern of differences is subject to some other qualifications as well: there are shifts in the magnitude of the differences associated with age and IQ level, and the sex difference appears to operate in the opposite direction in samples of black Americans. Reading failure is of course a relative concept, but it is clear that in the United States the number of boys who experience severe difficulty in learning to read, or who are completely unable to read despite remedial measures, greatly exceeds the number of girls who have this difficulty.

Much of the research that has been done on sex differences in reading in the United States has made the somewhat ethnocentric assumption that verbal sex differences universally favour females and explanatory theories based on this assumption abound despite clear evidence to the contrary. The sex difference favouring males seems well-established for Germany and, although the results vary with the specific population and with the subskill being assessed, there is evidence that boys achieve higher reading test scores and may have a lower rate of reading retardation than girls in such disparate cultures as England, Scotland, India, Chile, Japan and Nigeria.

The number of crosscultural studies of reading sex differences is not large, and some serious methodological flaws have not yet been overcome. As mentioned above, in studies of sex differences evaluation problems may also be encountered when sampling is biased by cultural factors which provide different sets of opportunities for males and females. But many methodological problems are not unique to the study of sex differences, such as comparability of measures from culture to culture, comparability of measures from language to language and the question raised by Anastasi (1970) of the prevalance in crosscultural studies of samples biased toward selection of the more 'Westernized' individuals in non western societies.

Explanations of sex differences

It is my belief that the majority of current explanations for sex differences in reading reflect an ethnocentric bias, in that they are based on the mistaken assumption that reading sex differences universally favour females, and that they do not take full account of the importance of evidence of crosscultural variation.

The theories that have been offered to explain the observed relationships between sex and reading fall into two broad categories which are equally applicable to sex differences in either direction and to sex differences in any culture. These categories are simply biology and culture. However, it is probably best to break them down further for heuristic purposes.

First the biological explanations can be divided into three main categories:

1 Differential rate or level of maturation. This is the point of view that holds that since females are more advanced in various measures of physical development, they should also be expected to be more advanced in intellectual development, including the development of skills necessary for reading. This explanation does not take into account the interactive role played by environment, or the contradiction implicit in the observation that although accelerated physical development is a universal phenomenon, verbal sex differences favouring females are not.

2 Activity level. Boys' higher levels of physical activity are sometimes said to be a factor in preventing their acquisition of reading skills. This explanation is also deficient with respect to the crosscultural factors mentioned above. It does not address the question of why the activity-level sex difference should produce deficient skills in one academic achievement area while producing superior skills in other areas. In

addition, it is difficult to imagine teachers allowing the amount of physical activity in their classrooms that would prevent boys from acquiring reading skills.

3 Age of school entry. It has been suggested in the United States that sex differences in reading favouring girls might be eliminated if boys were allowed to enter school a year later than girls to compensate for their lag in physical development. However studies of sex differences which have allowed for the pupil's age, together with information from countries with school entrance ages other than six years, suggests that there is no relationship between age of school entry and sex differences in reading.

Second, the social and cultural explanations for the relationship of sex and reading can also be divided into three main categories:

1 Curriculum materials

Content of readers

The content of stories in reading materials is sometimes alleged to have differential effects on boys' and girls' motivation to acquire reading skills or to practise these skills once they have been acquired. The work of Gaston Blom and his associates has established that American basal readers are of about equal interest (and therefore presumably of equal motivational force) to boys and girls. Wiberg and Blom (1970) in a study of readers used in England, Russia, South Korea, West Germany and the United States, found that the stories in these readers showed a predominance of poorly defined sex roles and a tendency to denigrate the masculine sex role. If reader content were directly related to sex differences in reading, however, one would expect to find sex differences consistently favouring females in these five countries using readers with anti masculine stories, but sex differences in reading do favour males in West Germany and perhaps in England as well. It is also interesting to note that basal readers have been severely criticized both by those who feel that readers are more geared to girls' interests and thus discriminate against boys and by feminist groups who feel that females are portrayed in a limited and stereotyped manner in these same readers and that the readers thus discriminate against girls.

Reading tests

Reading achievement tests have recently been subjected to the same criticisms outlined above for readers. It has been noted by Katz (1973) and Tittle (1973) that there is an unequal distribution of male and female actors in reading test items, and that in these items males are depicted in higher status and more numerous social roles. Although there has been much speculation as to the effects of this situation on the individuals taking these tests, the best evidence to date suggests that there is no relationship between these factors and achievement test scores. However, the tests may contribute to differential motivation for females and for males and they almost certainly reflect current cultural expectations for female and male roles.

2 Specific negative pupil-teacher interactions

Some American researchers have sought evidence that boys find it difficult to identify with their predominantly female elementary school teachers, and that this has an adverse effect on their motivation to learn to read; or that these female teachers find it difficult to relate to their male pupils and are therefore more critical and punitive toward them. However, the question remains: If teacher pupil relationships are faulty, why is their effect concentrated on reading and not on other subject matter areas? Work by Davis and Slobodian (1967) and Good and Brophy (1969) has indicated that boys and girls in American classrooms receive equal amounts of positive and negative comments from their teachers and equal opportunities to read. In addition, Clapp (1967) found that the teacher's sex had no significant effect on boys' reading achievement or on the attitudes they expressed about school and classroom activities.

The sex of teachers is probably an important variable in understanding sex differences in schools, but the single theory of individual prejudice against pupils of one sex is not an adequate explanation.

3 Cultural pressures and sex role standards

Several researchers have sought evidence that in the United States reading is viewed primarily as a feminine activity. Jerome Kagan (1964) found that seven and eight year olds viewed objects commonly found in the classroom as more clearly associated with femininity than with masculinity. Stein and Smithells (1969) found that both boys and girls at ages seven, eleven and seventeen rated reading as a feminine activity and mathematics as a masculine activity.

Several studies have attempted to relate these sex role standards (the individual's judgment of activities as being appropriate for males or appropriate for females) to achievement. Mazurkiewicz (1960) using a sample of sixteen year old males, found that reading achievement test scores were higher for those boys who considered reading a masculine activity than for boys who considered reading a feminine activity. Dwyer (1972), using a sample of both females and males of ages seven through seventeen, found that for all ages studied and for both sexes, children's sex role standards about reading accounted for a significant amount of the variance in their reading achievement test scores. That is, girls who considered reading an activity appropriate for females scored higher on reading tests of reading achievement than girls who considered reading an activity more appropriate for males, and boys who considered reading a masculine activity scored higher on reading tests than boys who considered reading an activity more appropriate to females. Given the fact that, overall, reading is considered a feminine activity in the United States, the magnitude of the sex role standards effect suggest that it could well account for the observed sex differences in reading in favour of American girls. It seems quite likely that sex role standards could account for the patterns of sex differences observed in other countries as well. Where reading is seen as an activity appropriate to females, girls should read better than boys. In cultures where reading is seen as an activity appropriate to the male role, boys should read better than girls.

The problems of how best to assess sex role standards and how to ensure crosscultural comparability remain. The questionnaire method developed by Stein and Smithells (1969) and Dwyer (1972) is appealing in its directness: it simply lists activities in the areas of interest and asks the subject to indicate whether each activity is for boys or for girls.

Other, less direct, lines of enquiry may also prove useful in evaluating the adequacy of the sex role standards hypothesis. The question of the influence of the sex of the teacher was mentioned above in connection with the explanatory theory of negative pupil/teacher interactions. It is probably an oversimplification to say that a situation where teachers are predominantly male leads to higher reading achievement for males and that a situation where teachers are predominantly female leads to higher reading achievement for females. The alternate point of view would be that the sex of the teacher is merely an epiphenomenon: in societies where the act of reading is highly valued, the teaching of reading is entrusted to men since as D'Andrade (1966) has pointed out, it is the males in all cultures who occupy the highly valued extrafamilial roles. Boys would then be likely to read better than girls not merely because their teachers are men but because their culture values reading and considers it an activity worthy of males' attention.

I believe this point is illustrated in the difference in reading sex difference patterns that exists between West Germany and the United States. Preston (1962) studied patterns of achievement in German and American children and found that American girls were superior to American boys on measures of reading achievement but that the reverse was true for the children in the German sample. He also found that reading retardation was more common among American boys than among American girls, but that, again the reverse was true for German children. Preston pointed out that elementary school teachers in Germany are predominantly male and that the German culture regards reading and learning as activities well suited to the male role. Preston's findings demand a sociocultural interpretation of sex differences in reading. Given that research has demonstrated that there is no direct relationship between sex and teacher and pupils' reading achievement, the sex difference among teachers (predominantly male in Germany, predominantly female in the United States) may better be considered indicative of the light in which each of these societies regards reading and learning in general. For complex social and economic reasons, it is the females working outside the home who have been relegated to the lower status occupations and in the United States, one of these occupations is apparently the teaching of reading.

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34 Folklore, East and West

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Culture: How are women portrayed in books? A comparison of East and West Germany.

Purpose of the textbook analysis

This project formed part of a larger study of the socialization of girls, East and West, which sought to identify the nature of sex stereotyping and the role expectations presented to girls in the schools of East Germany, West Germany and England. One specific question explored the ways in which women are presented in the reading textbooks of the lower elementary school grades. In view of the findings of recent research in both the field of child development and of political socialization, early learning experiences of children are crucial in personality formation and belief system structuring. What a child encounters in the selections of his beginning reading texts would appear to have an import in this connection. The textbook analysis had three specific purposes:

1 It sought to identify how women were presented.
2 It was to provide a basis for drawing inferences about role expectations for girls and hence for boys in England and the two Germanys.
3 It was to allow comparison to be made between the three countries in question.

Any content analysis of reading texts points to the variety of purposes for the inclusion of selections. A reading that is to expand the pupils' vocabulary may be said to have a purely educational purpose, while one which deals with animals capitalizes on young readers' so called developmental interest in the animal kingdom. Social concern as a desirable stimulus for action may be internalized from a story of American Indian children who offer a home to a nearly frozen young beaver (Plickat 1972). An effort to transmit to the young certain cultural traditions is demonstrated by the inclusion of some Christmas stories in East German readers. Political socialization appears to be the hoped for result of the insertion of illustrations of Communist flags in these same textbooks. In connection with the present study no test was administered to determine how effectively each selection in the readers may achieve the purpose for which it was included. While the initial intent of the content analysis was to focus on sex stereotyping, the study eventually allowed for more general questions to be raised about possible imbalances or deficiencies in the criteria applied in the selection process.

Textbooks selected for analysis

While the original intention of the author was to compare and contrast sex stereotyping in the elementary grade reading texts of England and the two Germanys, this goal was soon modified. England was excluded from the present analysis because many primary teachers do not utilize a set of readers when they provide direct instruction in reading for their pupils.

The books which were subjected to a content analysis were *Lesebuch 2, 3* and *4* for the German Democratic Republic, i.e. East Germany, and *Lesebuch 2, 3* and *4* published by Ernst Klett for the Federal Republic, or West Germany.

Scheme of analysis

The impetus for the development of a plan for the present content analysis came from Now (1972). The plan was refined by applying it to some recently published American elementary reading textbooks. Finally, a guidesheet was developed to categorize illustrations, central characters, themes, occupations attributed to males and females and references to parents and woman teachers. For illustrations and central characters the frequencies of males and females, of animals, of representations of nature, of the environment generally, and of patriotic symbols were established. Themes of stories and poems were classified as fitting most closely into the following categories: play on words or alliteration; imagery, humour, or nonsense; folktale; didactic in character; ingenuity or courage; informational including that of a political nature; and concerned with nature or even nature as well as people.

Results

Frequency counts done in connection with the content analysis of East German and West German elementary school reading texts lead to the conclusion that males are presented more often than females and that sexual stereotyping does occur in both countries. Especially in West German illustrations boys are portrayed far more frequently than girls. In East German as well as West German texts male figures far outnumber female figures as far as illustrations are concerned (see Table 1). The same is true for the sex of central characters (see Table 2).

Table 1

	West Germany			*East Germany*		
Illustrations	*Book 2*	*Book 3*	*Book 4*	*Book 2*	*Book 3*	*Book 4*
Men	6 and a clown	10	16	10	8 and Santa Claus	20
Female	1 and a witch	1	—	2	2	1

Table 2

	West Germany			*East Germany*		
Central Characters	*Book 2*	*Book 3*	*Book 4*	*Book 2*	*Book 3*	*Book 4*
Male	17	29	38	30	40	35
Female	7	8	3	7	10	6

Since males rather than females are the central characters of so many stories in these readers, the occupations in which these persons engage appear to perpetuate traditional sex stereotypes in the world of work. In Klett's West German third grade reader women teach, serve as a maid or a cleaning woman, sell newspapers or candy in a sweet shop; in the fourth grade readers they only keep house. No woman is introduced as engaging in an occupation outside the home. In the same reader men hold contemporary jobs such as mayor, policeman, locomotive engineer, and baker as well as more traditional ones such as hunter, sailor, miller, tailor, soldier and beggar. The fourth grade reader in the same series also focusses heavily on craftsmen like a weaver, a shoemaker and a watchmaker along with five kings, three giants and a lookout.

Males found in the pages of East German readers engage in modern occupations. They are crane operators, tractor operators, mechanics, or drill operators in the second grade reader, auto mechanics, workers or foremen, engineers, or metal workers in the third grade reader, newspapermen, pharmacist, machinists and miners in the fourth grade reader. In each volume there is a male farmer, a male doctor and a male teacher. Women are also shown in a variety of occupations although the range is more narrow than that attributed to men. In the grade *2* reader children meet a woman director of a children's home, a woman section chief in a factory, a salesgirl, and a kindergarten teacher.

In the third grade reader they meet a woman animal laboratory technician, a woman factory worker, and a nurse, and in the fourth grade reader, one female character is an economist, one a veterinarian, one an agronomist, one a revolutionary, one a teacher of Russian, and another — yes, a librarian.

The social realism associated with Marxist-Leninist ideology which the East German government espouses emerges in still other ways in the elementary school reading texts. Humour, alliteration and nonsense appear infrequently in these books. In the West German readers, on the other hand, many poems and stories can be characterized by these terms. A further lack of reality is caused by the very frequent use of animals as central characters in the second grade readers and even more so by the heavy use of myths, legends and fairy tales throughout the series. While a West German pupil reads about giants and kind dwarfs in dark mountain regions, an East German child meets the real world around him in the pages of his reader. In many a pointed lesson he is socialized into the political, economic and social life of his communist country.

Political socialization through the East German readers appears particularly broad. Illustrations show the young child what a rocket, a tank, and a gun look like. Innumerable soldiers have been drawn for him. At the fourth grade level he reads about August Bebel, Karl Liebknecht, Rosa Luxemburg, Walter Ulbricht and Wilhelm Pieck, all past leaders of German communists. In another selection he finds out what Sunday morning was like for the Karl Marx family when they lived in exile in London. He is told about the evil deeds of Americans in Vietnam and of the Nazi aggressors in his own country. His national anthem has been reproduced, he learns what May Day celebrations are for, and he makes the acquaintance of the Pioneers, the communist youth group, which he is likely to join as an East German youngster.

Despite the intentional politicization of the East German readers, they contain some of the traditional German literary works. Grimm's fairy tales, the comic figure of Till Eulenspiegel, a poem of Goethe are found here as well as in the West German readers. While the latter also include stories from Scandinavian folklore, East German readers introduce pupils to some Polish and other Eastern European tales.

Interpretation

A comparison of East German and West German elementary school reading textbooks leads one to conclude that sexual stereotyping particularly in West German books leaves the role of mother fully intact according to the role expectations of the nineteenth century. East German readers provide some realistic description of a woman's life style in the German Democratic Republic. Since 43 per cent of East German women and 30 per cent of West German women are employed today, such realism appears to be appropriate (1972). If girls are expected to spend much of their adult years in the labour force, as they must in East Germany and as they are likely to in West Germany, readers might include women in a far greater array of occupations than has so far been the case.

Some other observations raise questions about each of the series of readers. Where the second grade West German reader features animals in innumerable selections and assigns near human characteristics to them, the result may be an increase in the pupil's love and understanding of animals but not necessarily of the complex human condition. Again, urban children using the West German readers — and today they outnumber children growing up in the rural areas of West Germany — may encounter some difficulty transporting themselves to remote, dark mountains and to days of kings and princesses, the settings of the many myths, legends and fairy tales that seem to dominate the books. The stark horror of some of these stories remind one of the efforts of British educators to remove such selections from German classrooms when these educators participated in the reconstruction of German education during the postwar occupation of Germany. Perhaps a young child relishes imaginary settings, but one is surprised by the remoteness from contemporary life. In the fourth grade West German reader, for example, no automobile ever makes its appearance and the pupils never meet a foreign worker. Two and a half million foreign workers today live and work in West Germany and their children have by now joined their West German peers in the schools. No selection yet deals with the various inhabitants of a school trying to overcome existing language barriers.

The pervasive political focus in East German readers raises primarily the question of the effect on pupils. Do pupils come to understand the rationale of Marxist-Leninist ideology, or do they simply learn slogans and even come secretly to reject that interpretation of their world? Do the many politically oriented stories result in a disinterest in reading generally? One wonders how carefully the selections have been gauged to match young readers' ability to absorb information and to internalize it.

The reliance on a single set of readers in East Germany and in most West German classrooms implies an assumption of a commonality of pupils' reading skills. Where tests have been administered such an assumption has been proven faulty. In addition, children's interests, experiences, and maturational level are varied enough to suggest that classrooms need to offer a wide range of reading materials. Perhaps the British teacher in an 'open classroom' has the answer when he or she encourages pupils to select his own book to satisfy his current interest and skill level.

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35 Utilizing available published data: the teaching of reading in the elementary schools of France

Paul E. Ruthman

Methodology–research: How to approach comparative reading research using existing data.

Because educators search for solutions of scholastic difficulties by studying the problems found in other countries, comparative education and reading have recently begun to acquire a new significance.

A comparative study quite ideally would include observation of reading instruction in a particular educational system. Even though distances are now quickly covered by jet planes, the rising inflationary trend and reduction of school budgets makes such an activity a costly one. The result is a dilemma and one often must turn to the use of published sources for the study of reading programmes in other countries. It is not a serious handicap but actually becomes a necessary part in a study of comparative reading.

Importance of using published sources

Before planning to observe reading instruction in another country it is desirable to orientate oneself. Naturally each educational system has certain national characteristics which need to be understood. There are several reasons why it is advisable to begin the study by using published sources.

Utilizing existing data

It is generally thought that this concept is the first rule of research. In a manner of speaking, it is not necessary to reinvent the wheel or the lever each time a problem is to be studied. In fact, the mark of a scholar is the ability to profit from previous experience and the knowledge which has been published. In brief, duplication of effort and evidence is wasteful when the literature in the field of comparative reading is extensive as well as available.

Direction for the study

A topic, such as the reading instruction in the elementary schools of France, can be an endless task if the researcher lacks direction. Existing literature will guide one along certain practical lines as well as to educational agencies and sources of information. Thus the published data will help to reduce the trial and error factor that plagues the researcher as he enters a new field.

Perspective for the study

Before one can develop an appreciation for the details of reading instruction one would do well to become conversant with the educational system. The understanding of concepts such as origin, structure, purpose and control of education will provide a framework for a more specialized study of reading. In this way the characteristics of a reading programme can be placed in perspective and help the researcher to avoid faulty conclusions based upon facts collected out of context. Furthermore, one avoids the risk of simply comparing two unlike systems of education.

It is therefore quite unlikely that one would profit from a field study and observation of reading instruction in another country unless a review of the literature has been done.

Published sources used to study the French reading programme

The professional literature in comparative education and reading has become extensive in the last decade. In fact, the problem in most instances is not the dearth of information. Rather the difficulty lies in selecting pertinent and authoritative studies from a host of sources. Depending upon the type of comparative study one undertakes, there are a variety of publications which would be helpful.

Professional books

Commercially published books in the United States and England on all aspects of education have been widely circulated for the past fifty years. Many of these supply considerable information about:

1 The history and development of education

Such texts provide the reader with an awareness of the school organization and structure. One can also determine the origins and purposes of a system as well as its administrative control. This in turn, allows the scholar to become acquainted with the nuances of the reading programme. Helpful sources to understand the French system are Gal (1961) and Fraser (1971).

2 Comparative education

Such books give the researcher insight into the likenesses and differences of educational systems. Many of these studies are concerned with linguistic differences, cultural patterns reflected in reading materials and educational expectations for children. Suggested titles in this area are King (1958) and Kandel (1926).

Publications of societies and organizations

These accounts often give detailed studies on specialized aspects of education such as reading. In the study of the French reading programme it was profitable to use the UNESCO publications. Of particular help was Gray (1956). The work includes information on reading in fourteen languages. It further guides the researcher and enables him to consider the essential components of reading such as age of beginning reading, teacher preparation, materials and method. Data of a more statistical nature can be readily found in the various World Surveys of Education which are published periodically by UNESCO. Another organization which provides information about reading instruction is the International Bureau of Education in Geneva.

More recently, a number of professional journals issued by the International Reading Association have included articles about reading in various parts of the world.

Publications of the cultural attachés

The French Cultural Attaché in New York issues quarterly, *Education in France*. Most of the articles deal with general education topics, however, some are concerned directly with reading. From this source it was easy to learn about the preparation of elementary school teachers, the curricula found in the kindergarten and the elementary or primary schools. By way of statistical data, much information was obtained on school enrolments at various levels, results of academic achievement and budgets. Very practical help was given to guide the researcher to other Ministry publications as well as agencies responsible for elementary education. In addition, a series of observational visits to schools in France and interviews with education officials were arranged by the French Cultural Services in New York.

Publications of the Ministry of Education

As would be expected these pamphlets are written in French and are not generally available. However, they do supply very specific information about reading. Such details as the amount of instructional time for reading, materials, methods and teacher education programmes are delineated. Of special interest to comparative reading studies are the results of reading achievement, the extent of reading problems and conditions which contribute to reading failure. Such information is helpful to the researcher in planning for interviews and classroom visits. Two sources of importance were found to be Gal (1958) and Lebettre (1959).

Instructional materials

The survey of instructional readers and primers is an essential source of information when studying a reading programme. An analysis of these materials will furnish the researcher with facts about vocabulary, story content as well as method and skills. In Paris, the Institut Pedagogique National, has a complete collection of all reading books and a staff to assist the researcher. It may be assumed that other countries, with a highly centralized system such as France, would offer a similar service.

In summary, these few suggestions of published materials on the French reading programme will give the prospective researcher an idea of the variety of sources. A thorough study of similar documents will help one to understand the educational system of another country, to learn details of its reading instruction and to arrange appropriate contacts in order to complete the research.

The French reading programme

From the standpoint of an American researcher, the French educational system and its reading programme is a model of classical perfection. In America, the local control of education has resulted in the development of countless school systems. In reality there is one system for each municipality. All components of the reading programme such as: school entrance age, materials, methods, teacher preparation and curriculum guides are all determined by local boards of education. The membership of these boards consists of lay people selected by popular election. Needless to say the reading programmes are varied in quality and format.

By contrast, the French school system is the complete opposite. Its reading programme is national in scope, controlled by specific regulations and implemented with precision.

Place of reading in the French elementary school

As with all aspects of French education, the elementary school reading programme is controlled by official instructions. These directives are issued periodically by the Ministry and are stipulated by national legislation. Reading according to these directives, is considered to be the principal task of the elementary school. Attention is given to school entrance age, amount of instructional time for reading and preparation of teachers. Compulsory attendance begins at six years of age. Children who have not reached the age of five years and nine months by the opening of school are not admitted to the first grade. Such children attend the upper section of the kindergarten, which is reserved for children of five years old. In reality then, many children are seven years old before the end of first grade.

Official instructions specify the amount of time to be spent in the teaching of reading. Kindergartens spend one hour a day in reading activities and in first grade 50 per cent of the day is used for reading and language. This is gradually reduced and by the fifth grade 30 per cent of the day is reserved for reading.

The controls of the Ministry are further seen in the preparation of elementary teachers who are trained in normal schools. During a four year programme, three years are devoted to general education and the final year is spent in professional training. Included in the professional programme are three periods of student teaching in a laboratory school. Professional work includes method and curriculum materials courses in the teaching of science, arithmetic, art, music and physical education. Traditionally, specialized courses in the teaching of reading have not been offered in the normal schools.

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Such a situation is understandable because, in the past, the elementary teachers have not taken university courses. However, Fraser (1971) reports several factors that have altered this situation. Since 1963 many of the normal schools have offered a two year course of post baccalaureat studies. Also the new law of November 1968 makes it possible for all future teachers to enroll in university studies.

Materials used in reading instruction

The relative importance of the instructional reader has been recognized by the Ministry which annually publishes a list of reading books for school use. Many types of books are included and the teacher is allowed to choose one that advocates the method he prefers to use. Generally authors have written only one reader rather than a series. Therefore, children use books at various grade levels that have not been coordinated for vocabulary and skill development.

Most French readers are not accompanied by a complete teachers' manual or guidebook. Although the preface gives guidance for the use of the reader, it does not provide for a sequential development of vocabulary and other skills. Children often use a notebook for practice activities but publishers are now developing workbooks that are coordinated with the instructional primer.

Methods of reading instruction

The Ministry does not require the use of any particular method for reading instruction. Teachers are advised to use any method as long as it produces quick and lasting results. According to Simon (1957) the three methods of teaching beginning reading are:

1 the synthetic or phonetic method
2 the analytical or whole word method
3 the mixed method.

He further reports that the synthetic or phonetic method was used by nearly 95 per cent of the teachers. However, the recent expansion of teacher training programmes will undoubtedly result in more variation and innovation in the teaching of reading.

Extent of reading problems

Information obtained from research and classroom observations was verified by interviews with the director of a normal school, educators selected by the Ministry and the staff of a medical-psychological centre. All agreed that there is a growing awareness among French educators that a number of children do not learn to read and hopefully the situation can be corrected.

Gal (1958), the chief of research at the Ministry indicated that many children do not read on grade level and as a result nonpromotion was a problem. He further stated that 32 per cent of the elementary school children repeated one or more grades during the first five years of school. Most nonpromotions were clustered at the first grade level where 25 per cent of the children do not learn to read well enough to be promoted into second grade.

Gal (1958) reported that children fail in reading because of the following reasons: the insufficient preparation of teachers, the initiation of reading before the child reaches a mental age of six years and six months, psychological problems in children and incorrectly prepared reading materials. A particular method of reading instruction was not considered a cause of failure; but rather it was thought that the faulty application of any method will result in poor learning.

Treatment of reading failure

Because the policy of nonpromotion has neither prevented nor corrected reading problems, remedial teaching has come forward as a possible solution. A significant development has been the establishment of medico-psycho-pedogogical centres in some of the larger cities. Lobrot (1967) reports that these centres were originally created by the medical schools and psychology departments in the universities as well as by private groups. However, recently the services of these centres have been offered in conjunction with the public schools.

On the basis of information obtained from published sources, classroom observations and interviews it is evident that reading is the principal task of the French elementary school. Although the Ministry controls most aspects of the programme it does not require the use of any particular method. Officially, the existence of reading problems has been recognized and appropriate action has been initiated.

From an American viewpoint, there are several factors in the French reading programme that might alleviate our problem of reading failure. Probably the most important is the increased use in the practice of new words in language activities, spelling and penmanship. Other considerations would be: better kindergarten curricula, higher school entrance age and a daily schedule that would increase the amount of instructional time in reading.

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36 International cooperation and the improvement of reading

Elisabeth Boucherant

Stressing the need for and value of cooperation between all those concerned with the same professional fields and pursuing the same objectives does not seem necessary and would actually be redundant; this has been done on many occasions in the past, and it is assumed that there is general agreement that people in one country cannot live in isolation from other countries, cannot ignore and leave aside the problems faced elsewhere as well as the progress made elsewhere, but that they are part of a large community where everybody has his role to play and that only benefits can be derived from an exchange of ideas and experiences. This seems particularly important at the present time, where the world is in constant and rapid evolution and education undergoing so many changes which, either directly or indirectly, affect the development of reading. The purpose of this paper is therefore not to emphasize again the importance of international collaboration but rather to examine the ways — or at least some of the ways — in which the forms of cooperation and channels of communication already established might be further improved, through an organization such as the International Reading Association.

Throughout this study, it should not be forgotten that cooperation does not mean 'Help' or 'Give' on the one side and 'Receive' on the other. Cooperation is a twoway traffic, a mutual and reciprocal enterprise, and if so called 'developed' countries or societies can certainly help and assist through different means (and they certainly do), they can equally greatly benefit from learning about problems, experiences and solutions in so called 'developing' countries or societies. This applies to all continents and to all sectors of the population within one continent or within one country. It is only through that concept being fully understood and adhered to that cooperation will have its real sense and lead to positive results.

Problems encountered and general fields of action

The task is not an easy one, and quite a number of problems and difficulties are being faced in the development of cooperation for the improvement of reading. Apart from the existing differences in cultures, traditions, languages, educational systems, socioeconomic and political backgrounds, and between various countries — which while representing a problem also constitute an enrichment — apart from the language problem between ourselves (which is a considerable one and is still far from being solved), one of the main difficulties perhaps remains the difference in the place given to reading within the educational pattern, in the very notion or concept of reading development between different countries. In some places, many people only think in terms of decoding of written symbols, development of mechanical skills, initial reading instruction for young children (methods, syllabi, measurement tests and special problems for children having learning difficulties). In other places, reading is directly related to language instruction and has no place, or very little place, as such in the curriculum. On the other hand, and many share this view, it seems that 'reading development' is a long term process which goes far beyond this somewhat limited approach, is much wider in scope and actually covers reading instruction, of course, but also comprehension, reading interests, promotion of the reading habit and provision of materials in relation to actual needs and in a more general way, the full development of the personality through reading, not only as far as children are concerned but also as far as adults are concerned, (the role of the book and of the printed word for the whole cultural and human development, their role as an educational tool, and their role as an instrument for better life and better understanding between people and nations).

The acceptance of this broad and comprehensive notion of reading development has two immediate implications.

First, action will have to be carried out, obviously with an interdisciplinary approach, and in an extremely wide variety of fields; ranging from preprimary education through higher and university education, covering teacher education and in-service training, research (particularly with regard to its application and the introduction and evaluation of techniques); language teaching (mothertongue or foreign languages) and education in bilingual or multilingual environments; education of handicapped children; education of migrant workers, promotion of adult literacy role and use of mass media in the improvement of reading. All possible fields of action cannot be listed here, but it is clear that there is an immense variety of tasks to be undertaken.

The second implication is that it is not sufficient for 'reading specialists' as such to cooperate among themselves, but that it is also essential to ensure the cooperation of all individuals and institutions concerned with such questions and this at the national, at the regional and at the international level (Ministries, planners, teachers, research workers, librarians, parents, doctors, psychologists, sociologists, linguists; adult education and literacy movements, cultural associations, writers, publishers, book development centres, representatives of mass communication media, governmental and nongovernmental agencies active in these fields). It also means that a greater effort should be made to inform the general public, draw its attention to the development of reading methods based on recent research and in a more general way to the role of the book and of the printed word as a source of knowledge, recreation and human and cultural development, and thereby to the importance of a good reading ability.

It goes without saying that, in this cooperative undertaking, account has to be taken of each national, and sometimes even local, situation. Cultures, traditions, educational systems and patterns have to be respected, and the aim is not to harmonize or establish a common policy applying to all countries and to all situations. What is needed is a common commitment to the development of strategies for reading development and educational cooperation and this should be supported by a systematic interchange of information and experiences, by the provision of expert guidance and advice and wherever possible by a firm stand being taken on matters about which unanimous consensus can be reached.

How to achieve these goals — the role of IRA

This need for a common commitment, this willingness for joint action is not new. It was felt quite a long time ago, and actually led to the creation of the International Reading Association in 1955.

While the greatest proportion of individual members is still to be found in north America, the geographical spread of the Association proves most encouraging as also do some of the steps taken in order to further develop internationally so as to better serve the cause of reading throughout the world. In addition to the nomination of five area co-ordinators (in Iran, India and South India, New Zealand and Japan) and more recently of an IRA correspondent in Latin America, the best evidence in this regard might be the creation of the European Office, established in Paris at the end of 1971. On the basis of these two years' experience, it can be said that a considerable and increasing interest has been, and is being, shown on the part of many people concerned with reading development and that quite positive results have been obtained through the information, communication and coordination services thus provided.

Generally speaking, the role of an international association such as IRA might be defined as being essentially a role of information, of coordination and of stimulation. Clearly, in the same way as all the fields of action to be covered are closely related and cannot be considered in an isolated way, those three functions are also intimately related and have to be considered in a global perspective, each of them having a direct bearing upon the others. Within this general framework, the following is an attempt to examine what is being done, with the present machinery and with the limited means — from both the financial and personnel points of view — at IRA disposal, and what might or should be done in order to improve co-operation and facilitate common action. Such a review will certainly not cover all the activities developed or under way but will only underline some of the fields which seem of the utmost importance for the establishment of better communication and cooperation between all.

One of the main functions of an international association such as IRA is probably to act as a clearing house, a documentation and information centre, which assembles research reports, surveys, studies and all information on developments in reading instruction and reading development. A central place, not only where such information is assembled and can be found, but also where it is distributed from. Through a number of ways, IRA has performed that function, and is performing it, but it still appears to be somewhat limited in scope, at least from the geographical and language points of view; it should be enlarged so that, on the one hand, information is accessible to a greater number of countries and on the other hand, information is received and assembled from a greater number of countries.

Making research reports, bibliographies and abstracts of research results available to members does not, however, appear to be sufficient, and one of the most important tasks of IRA might also be to try and establish better communication between research and its application to the actual work of the teacher in his classroom. Efforts should be intensified to stimulate and encourage reading experts in all countries to analyze and criticize the research work carried out and publish information on the possible application of such results to classroom practice. (With this in mind, it might prove quite interesting and valuable to have the various comparative studies recently issued looked at, examined, and possibly criticized, by reading specialists and teachers from the relevant countries).

In addition to the above clearing house function, it is of course the duty of any international association to keep its members abreast of all developments in their fields of interest, and to provide at the same time a central place where points of view and opinions — sometimes quite divergent — can be expressed. The International Reading Association therefore conducts a very important publications programme which covers a wide variety of subjects, ranging from papers presented at meetings and conferences to specialized studies on very specific topics.

Some of the latter are the result of, and include the findings of, the various IRA standing or *ad hoc* committees; there are presently about fifteen of them, dealing with specific aspects of reading development, and while their scope is perhaps still too limited geographically, an improvement must be noted and representatives from different countries have been requested to collaborate in almost each of them. The language problem however still constitutes quite an important handicap.

The Association also publishes three regular journals: *The Reading Teacher* (elementary level), the *Journal of Reading* (secondary, college and adult level), and the *Reading Research Quarterly*. It has been regretted a number of times that the articles are only appearing in English, and also that the problems dealt with mostly relate to the situation in north America. The suggestion had therefore been made a few years ago, and has been made again quite recently, that one issue per year be devoted to problems in other parts of the world. While this would of course constitute an improvement, even this would not seem sufficient and it is hoped that, in the not too distant a future, several issues — if not all — can include articles on and from countries outside the north American continent.

In the same spirit, the publication of an international journal has been suggested and called for a number of times in the past, as the need was felt for a publication which could give a true picture of developments in various parts of the world, whether highly developed or in their developing stage.

Not to replace this international journal, as this is of a completely different nature, but as a further step towards better information and communication, IRA initiated, in January 1972, the publication of an international newsletter, *Reading Today International.* This is prepared in the European Office in Paris and published four times a year, in English and French. Its main purpose is to give information on recent developments in reading or related fields, publications, research and all such activities, as well as news of activities of national affiliates, meetings and conferences, etc. all of this in as many countries as possible.

Another role of the International Reading Association is to serve as a forum where educators can meet, discuss, exchange ideas and share common or differing experiences. While it is true that communication and cooperation can be instituted through correspondence, reading articles or books, etc. this will never carry the same benefit as, and cannot replace, face to face contacts. Meetings and conferences are therefore of the utmost value, not only because of what is learnt through listening to lectures or participating in discussions, but because of the opportunity they give to meet informally, discuss questions of common interest and establish or strengthen personal contacts with people from different environments and circles.

From the international point of view, the most important among such meetings are undoubtedly the World Congresses, which have been held every two years, in different continents, since 1966, and in which interest has steadily increased. The first one was held in Paris in 1966, with some 500 participants in attendance and with speakers from fifteen countries. In 1968, the Congress assembled in Denmark, and the number of participants increased to some 1,300 with twenty speakers on the programme. Despite the distance, similar interest was shown for the World Congresses held in Sydney, Australia (1970) and Buenos Aires, Argentina (1972). Participants from over thirty countries are expected to attend the 5th World Congress, to take place in Vienna, Austria, in a few days' time and for which programme responsibilities have been given to representatives from twenty-seven different nations.

Still with regard to meetings, when the Association has further developed geographically, it might be good to envisage conferences of the same type as the Regional Conferences regularly held in the United States. Cooperation by regions has been suggested many times and it is in that perspective that two European meetings have been held in Paris (one in December 1971, the second one in December 1973). Their purpose was to try and define the fields and ways in which better cooperation could be instituted at the European level, and attendance was therefore limited to one representative from each country where national reading associations were in existence or about to be created. Regional meetings could be usefully arranged on a regular basis, either on a geographical basis (Europe, Asia, Latin America) or by linguistic groups so as to facilitate communication between participants. A good example of the latter type are the Scandinavian Congresses regularly organized between Scandinavian countries. Very great benefits could also be derived from specialized meetings, assembling specialists and experts to discuss a limited and very specific subject, and this too could easily be done by geographical regions or by linguistic groups.

Another duty of the International Association is to stimulate and encourage its members, as well as people who are not members, to undertake research or other activities, to cooperate both between themselves and with other institutions, and to assist them in getting organized so that they carry the necessary influence vis à vis educational authorities, their governments and the general public in their own countries. This has been the basis of the efforts conducted with a view to stimulating the establishment of national reading associations, and as stated earlier, it is gratifying to see that such associations are now at work in twenty-two countries (not counting Australia, Canada, New Zealand and the United States, where there do not exist national associations as such).

In addition to providing information on studies, research reports, etc. and in addition to providing opportunities to meet, IRA could play an important role in helping its members to establish personal or collective contacts with other educators and specialists in different parts of the world. With this purpose in mind, the European Office has initiated the compilation of an index of reading specialists, by country and by specialization when any. This is still far from being complete, but work is in progress and the information so far collected covers about thirty-eight countries, mostly in the European region. It would be at present extremely difficult to distribute this list, but information can easily be obtained from the European Office.

With the same spirit in mind, the European Office has also initiated the compilation of a list of European universities and teacher training colleges providing courses in reading (with an indication of the duration of the courses, the kind of diplomas which can be obtained, whether they are open to participants from foreign countries, etc). This too, is still in progress, but it is hoped it can be completed without too much delay and kept up to date.

As a result of an increasing number of requests (through correspondence or visits to the European Office) and in order to enlarge services rendered to members, information is also being compiled in Paris on the various institutions which can, at the national level, provide such services as help to visit schools or educational institutions, information on the educational system, etc and on those which have in various countries the responsibility — or some responsibility — in the field of exchange of teachers. The question of exchange of teachers, scholars and reading specialists has been of concern to a number of IRA members for quite a long time, but this remains quite difficult and complicated a problem, and if no real scheme has so far been established, at least practical information can be provided on request.

Lastly (and this is really based on my own experience with a number of international organizations), an organization such as IRA should be able to have its voice heard in the deliberations and decisions of intergovernmental bodies such as UNESCO, the United Nations, the Council of Europe, etc any time anything of direct relevance to reading or book development is being discussed.

This obviously also applies to the national level, and it is hoped that there are not too many situations where governments take decisions without consulting the people directly concerned. In the same way, we should not accept that an educational international governmental organization would ignore the problems and importance of reading instruction, reading development, illiteracy, etc or would embark into projects — sometimes not very realistic — without consulting those who are really competent in those fields. This is not always the case, but it is clear that insufficient account is taken of the experience and expertise of actual practitioners. This might apply to UNESCO, as the UN agency specialized in the field of education and culture, and with which incidentally IRA is having quite sound collaboration, but it can also apply to the Council of Europe (which is conducting quite a number of projects and studies in the fields of mothertongue and language teaching in a number of European countries); it can also apply — although perhaps to a smaller extent — to the European Economic Community which has projects in preparation regarding education of migrant workers and language teaching; to some extent, it might also apply to OECD, and particularly to its Centre on Educational Research and Innovation.

As a specialized association, an association devoted to the improvement and development of reading, IRA should have a say in such bodies; it should cooperate, both in the preparation (through criticism, comments and suggestions) and in the implementation of various programmes concerned with reading or related questions. There are many fields, and many ways, in which this can be done. This might, in addition, help reduce the considerable duplication of effort and thereby the waste of funds, which is too often noted within the international community.

Part 8

Teacher education

37 Reading improvement through teacher education

Ann Nardone

Overview

A programme which is tailored to meet the needs of today's urban child requires a wide range of experience with reading techniques and materials. Often teachers lack the depth and range of specific experiences in reading primarily because most elementary teachers enter urban classrooms equipped with a background of minimal course work in reading required by teacher training institutions on the undergraduate level and little, if any, practical experience in the teaching of reading or handling the specific problems of the urban child. It has been found necessary to supplement the preservice training of teachers with an inservice reading programme specifically designed to meet the reading needs of teachers and children in the urban classrooms of Philadelphia.

Description

RITE (Reading Improvement Through Teacher Education) is a federally-funded inservice teacher education project operating in schools in the low income areas of Philadelphia. Presently, there are eight RITE people assigned to forty-five schools. This inservice programme proposes to bring immediate practical help to teachers in diagnosing existing reading problems. It also attempts to assist the teacher in designing and implementing effective alternative teaching procedures.

Opportunities for teachers to gain experience with various reading techniques and materials designed to achieve project objectives are provided through RITE's four avenues of operation: observations, demonstrations, conferences and workshops. Each school in the project receives weekly visits from the RITE representative assigned to the school. All the work is accomplished during the school day. Principals of participating schools assist the RITE project in reaching its objectives by providing teachers with released time so that the RITE representative can conduct conferences and workshops.

In September, a RITE representative conducts an orientation meeting in each project school to acquaint the staff with project procedures. At that time, information is collected concerning the special needs and interests of the staff. Some RITE members choose to initiate their periodic visits by interviewing the staff individually, thereby giving them an opportunity to express their needs or simply to relate their views of the school situation.

Methods

The RITE consultant is committed to four schools per week. Each morning is given to a particular school: the afternoons are left open to allow for flexibility. For instance, a teacher may need a follow-up of a lesson taught that morning, or a principal from a Tuesday school may want her RITE representative at a Thursday afternoon staff meeting. Also, the other members of the RITE staff may be planning a workshop and need assistance.

Every Friday is left open for a staff meeting. This includes Title 3 members who do the same type of work but who work in the outlying districts of the city. Those students are not as economically deprived as in Title 1 schools. Also on Friday, there is a meeting with the director. The staff members are then free to discuss their plan of action in the near future and then prepare the paper work needed for the coming week. Frequently, usually upon request, sales representatives will come to the office to display their materials and to explain their reading series. The RITE staff in turn has the opportunity to present problems related to that particular series which they may have encountered in their daily contact with teachers and children.

After orientation in September, new teachers receive special assistance in the form of workshops held specifically for them which cover topics generally considered to be most valuable for beginning teachers. These workshops are held at a central location convenient to the staff in surrounding schools.

A workshop in classroom management is conducted exclusively for the new teachers since it is essential that teachers learn to organize their material and manage a classroom before they can expect to become effective in their teaching. A second workshop follows in a few weeks in which the RITE consultant explains the procedure used in teaching a reading lesson. In the meantime, these new teachers are expected to also attend the larger area workshops held for other staff members.

Procedures

Services to school administrative personnel

Conferences between the school principal and the reading coordinators are vital to the success of the RITE project, since they can be helpful in giving administrative insight into areas of need within their school. These conferences include a discussion of the selection of new reading materials.

Services to classroom teachers

Observations

Observations of a teacher operating a classroom are given at a teacher's request or, if requested by the administration, only with the teacher's approval. Observations are preceded by a conference to set up details for the observation and are followed by a feedback conference to discuss those points which the observer feels will help the teacher to improve her instructional techniques. Results of the observation are considered confidential information and only a generalized report is given to administrative personnel.

Demonstrations

Demonstration lessons are given in an actual classroom situation at the request of the teacher. They require advance planning for smooth coordination of the content material with the regular reading programme. Demonstrations are seldom done 'cold', i.e., extemporaneously. Usually the RITE person observes a group of children at least once before doing a demonstration with them, then each demonstration is preceded by a brief conference to aid the teacher in knowing specifically what to look for. A conference follows the demonstration whereby the lesson is reviewed and important facts discussed.

Conferences

A conference is a planned meeting between the RITE consultant and one or more teachers for the purpose of discussing a particular problem or sharing insights or information on a specific technique of interest to a teacher or small group of teachers. This one-to-one or small group meeting *is not* to be confused with the planning or feedback conferences which occur only in connection with a demonstration, for example.

RITE staff members have used the conference technique extensively at the beginning of the project year. This was considered important since the teachers should view the RITE staff as friendly and as supportive resource persons. By the same token, the RITE staff in turn uses that opportunity to become acquainted with the teachers and to establish rapport with them.

Workshops

Workshops are formal presentations given to numbers of teachers larger than in a conference situation. Generally, teachers are released from class to participate in a workshop. Topics for the workshop are usually chosen as a result of joint planning by the RITE consultant and the school coordinator.

To date, most workshops have been done as a service to an individual school need, covering such topics as: how to use parent aides; what is the language experience approach; overview of a new reading series: how to give a directed reading activity.

Microworkshops

These workshops are designed and executed to meet and cover individual school needs. They usually last about one to one and a half hours.

Area workshops

These are designed to meet the needs of teachers from several schools located in a geographic area. These workshops are usually full or half-day sessions which cover two or three topics. One third of the entire group attends a presentation of a topic. For example, two or three members of the RITE staff would present the use of the tape recorder as a method of teaching language arts; at the same time, a demonstration explaining the use of games as an independent activity would be observed by another group. Then a third group see how the RITE staff presents the use of the newspaper to teach comprehension skills: finding the main idea in current events, making a value judgment after studying the want ads, or studying cartoons to develop skills in inferential thinking and drawing conclusions. After the allotted time for the first part of the workshop, a signal is given and group one would move to the second topic being presented, in a round-robin fashion until all three areas of the workshop being presented have been observed.

Special interest workshops

In addition to the weekly services offered by RITE representatives to their assigned schools, RITE members plan and execute workshops for teachers classified in a 'special interest' category. These workshops differ from the standard workshop in that: teachers from any project school may attend; they are held at RITE headquarters; they may involve resource people from outside the RITE team; they are intended for a specific, restricted audience; and they may be of an ongoing nature. Topics for these workshops will vary. Some workshops may be of a serial nature requiring two or three meetings to cover a specific topic.

Ongoing workshops

Kindergarten workshops

The principals of RITE schools who have a kindergarten release their teachers to attend a series of ten half-day workshops. The workshops are designed to: acquaint teachers with the social, physical and emotional needs of kindergarten children; develop the teacher's skills in implementing a well-planned language arts programme in her kindergarten class; and assist the teacher's skills in diagnosing the reading readiness skills of her children.

Coordinator's workshops

These workshops are designed to provide specific help to school reading coordinators in organizing the reading programme within their schools. This includes discussion on grouping procedures, time schedules, and recordkeeping. The reading coordinators are responsible for overseeing these areas in their schools. RITE also plans to offer coordinators assistance in specific reading areas so that the school coordinators will in turn become resource persons within their own school. Special workshops planned for coordinators include: testing (selection, administration and interpretation);

identification and referral of children who need further professional evaluation; and communication techniques with parents.

The United States Office of Education made a study which compared various reading series and programmes used throughout the country and, as a result, came up with the basic conclusion that no one approach to reading is so distinctly better than the others that it should be considered the best method, and no one method should be used exclusively. Interestingly, the major variable is the teacher who uses a reading series. They found more differences in results among children and teachers using one system than they did between children and teachers using different systems.

So the teacher does make a difference. The thrust of our programme is to keep in the foreground the theme of the 1974 year IRA convention: 'The Teacher: Key to Excellence in Reading'. Our programme sees a great need for continued education of teachers in reading to develop this excellence.

38 Inservice training

John E. Merritt

The pattern of provision of inservice courses has been changing fairly rapidly in recent years. As a result, we can now see more clearly one or two general principles and patterns that may help us to make more effective provision in the future.

Modular-based courses

There is a need to provide courses which lead to some kind of qualification. Only a small proportion of this need can be met by full-time secondment so part-time courses must be provided to fill the gap. Many teachers are not able to commit themselves to prolonged periods of part-time study, however, so it looks as though part-time courses might best be provided on a modular basis. Credits can then be awarded for satisfactory completion of each module and these can be combined to provide a recognized qualification of some kind. Such modules must be carefully structured so that when they are combined they are not merely a collection of separate parts but form instead a coherent whole. They should provide a substantial theoretical base from which to develop improvements in teaching practice in certain major areas. Some obvious areas are as follows:

1. learning to read: this covers preschool learning as well as the first years of primary education
2. reading to learn: this includes the early years, but emphasizes the development of effective reading and study skills across the whole age range
3. language across the curriculum: the development of language for different purposes in a variety of curriculum activities
4. literature and the curriculum: the introduction of literature in each curriculum area whilst maintaining the primacy of reading literature as an end in itself
5. special problems: this covers the range of problems presented by immigrant children as well as remedial problems
6. adult literacy: the development of functional literacy, i.e., effective reading in the social context
7. advisory work in reading: the development of reading across the curriculum within a school; the organization of study groups, workshops and courses at the level of the school and teachers centre.

In a course in any of these areas there should be many opportunities for developing a variety of practical applications of any theoretical principle. Following this, however, there should always be provision for a substantial practical course in which all the separate elements of the initial course can be developed and integrated within a total ongoing situation. Here is the great strength of the part-time course, as a well organized programme of practical activities can be undertaken in the realistic context of the teacher's own school. This kind of practical work, together with a theoretical evaluation, can reasonably be construed as equivalent to a separate module for the purposes of course credit.

Problem-centred courses and the evaluation and development cycle

A major difficulty with problem-centred courses is that the number of problems that need attention is virtually infinite and the related studies can be pursued at length, and at any depth. The problem-centred course is a bottomless pit. The effectiveness of problem-centred courses depends, therefore, upon the careful consideration of priorities. The first essential for this is an overall evaluation of the state of reading in the schools of the teachers concerned. All members of staff need to be fully involved in this overall evaluation, for once they have identified and then agreed on the major problem areas they are more likely to participate in the planning of effective action. The problem-centred course may then consist of nothing more than a succession of staff meetings at which possible measures are proposed and systematically evaluated over a period of time. If the staff decide that they need advice on evaluating reading standards, on the selection of suitable materials for developing reading, on methods of teaching, general or specific, or on any other matter, they can then arrange to get this by whatever means are available. A suitably qualified member of staff should be able to provide most of the advice needed, for there is little hope of advance in reading standards if schools do not have at least one teacher with enough knowledge and experience to handle the normal range of problems.

If the teacher with a more specialized knowledge of reading maintains close contact with colleagues of similar experience in neighbouring schools and the warden of the teachers centre, more intensive problem-centred courses can readily be organized as and when required. Given this kind of approach, courses can be carefully tailored to meet the needs identified by the teachers themselves in their own particular schools. The evaluation and development cycle itself, however, could prove to have an enormous value as a feature of inservice training as it provides for the maximum use of resources and expertise that already exist in many schools. It is also likely to encourage the continuous development of expertise as experienced teachers extend their own horizons in seeking to provide the best possible service to their colleagues.

Intensive short courses

If the concept of the evaluation and development cycle became established then most of these courses could, as we have seen, be generated by demand from the teachers themselves. In addition, however, there will always be a need to inject into this process some courses originating from outside. Such courses might be organized to introduce the findings of recent research, novel developments in schools in other areas, and so on. It would be most economical, generally speaking, for such courses to be aimed at the more highly qualified teacher as this would provide for the greatest degree of dissemination.

The ATO DES model

This model is very well conceived in that it provides for a short period of full-time study initially, a certain amount of half-day release during term, and a further day or two to pull ideas together at the end of term. The content of the courses is not always as well integrated as one might wish, nor are the possibilities for practical application of principles always fully exploited. It is reasonable, however, to expect a steady improvement in course design as experience is gained in running this kind of course.

These courses do not lead to the award of any kind of credit as it is felt that this might well distract the teacher from the real purpose. This is certainly a serious danger. Nevertheless, it is possible to design courses which provide educationally relevant activities, rather than material for subsequent regurgitation in examinations, and in which assessment procedures are carefully designed to encourage the former rather than the latter. Perhaps, therefore, the possibility of awarding a credit for satisfactory completion of an ATO DES course should not be permanently dismissed. Whatever view may be held on this, the ATO DES model of course provision is certainly one that lends itself to a highly effective integration of practical work with theoretical study.

Full-time courses

These have usually extended over one term or over one academic year. Recently, however, there has been a gradual introduction of four-week courses. Each of these can meet a different kind of need and some of the general considerations follow.

The four-week course

Four weeks of fairly intensive full-time study can provide a reasonably substantial knowledge base in each of the areas listed at the beginning of this paper. Four weeks of full-time study, or the part-time equivalent, might seem therefore to represent a convenient size for a module. An ideal arrangement would be for each full-time four-week course to be followed immediately by a part-time equivalent in which the principles studied are applied systematically in normal teaching situations, as suggested earlier. This is essential if transfer of learning is to be achieved on any reasonable scale and if the learning itself is to be validated in experience. A school can cope tolerably well with the loss of a teacher for four weeks and will then benefit from the insights and energy of the teacher who works to satisfy the requirements of the part-time practical course on his or her return.

The one-term course

Recruitment has always been difficult for one-term courses as teachers are hard to replace for this period of time. It seems unlikely, in the present climate, that the provision of such courses will increase substantially, if at all. If this is so, it may be worth giving preference on such courses to teachers who have already completed at least two modules, one theoretical and one practical, in a given area. They would then be in a much better position to take full advantage of a substantial period of time for full-time study. Even in the one-term course, however, it would be important to include many opportunities for practical application if the studies are to lead to a raising of teaching standards. As with the four-week full-time course, the one-term course might be followed by a part-time component to provide for extensive application of principles studied to the normal teaching situation, and their evaluation.

The one-year course

These courses will continue to be available to only a very small proportion of teachers in the foreseeable future. It seems fairly obvious that preference will increasingly be given to teachers who have already shown substantial interest and application by pursuing part-time studies. If credits for part-time studies can be combined to provide a qualification such as a diploma, then students who attain a reasonable standard should be regarded as eligible for consideration for admission to higher degree studies. The one-year courses could provide for this kind of work. An increase in the opportunities available for undertaking studies at this level will enable teachers to make a much more significant contribution to the development of theory and practice in the field of reading in the next decade.

Conclusion

The provision of inservice courses must be flexible and must be closely geared to the needs of practising teachers. This can only be achieved if teachers are given more experience in evaluating their own needs and opportunities for participating in decisions about course provision and course design. This article is intended to give some practical indications about ways in which this may be approached. It has also suggested ways in which ideas developed in such courses can be fed directly back into teaching practice, and, at the same time, lead to more fruitful studies at diploma and higher degree level.

39 Teacher education

Elizabeth Hunter

Throughout the United Kingdom there is a wide diversity in the provision of courses relating to the teaching of communication skills. Within the curriculum structure of courses with similar core elements, differences in time allocation and emphasis are often considerable, and there has been no real attempt at consensus regarding the identification of principles or criteria for the guidance of course planners.

The Teacher Education Subcommittee of the UKRA has as one of its main functions the enabling of collaboration among those involved in the planning of initial and inservice courses in reading, and a series of workshop meetings have been held directed towards the following topics:

1 discussion of the implications of recent developments and reorganization in the sector of teacher education
2 discussion of the methodologies involved in applying an analytical approach to curriculum development in the field of reading and related skills
3 involvement of teams of teacher educators to select, devise, produce and evaluate multimedia materials appropriate to widely approved curriculum requirements.

In England, current reorganization of colleges of education and the curtailment of teacher-training numbers may be detrimental to the improvement of reading standards in our schools. The added factor of economic stringency may create a situation which could be described as bordering on crisis. It is interesting to note, however, that the Japanese word for crisis is derived from two words meaning 'calamity' and 'opportunity', and the latter may provide the positive element with regard to provision for the teaching of reading in courses for teachers. Certainly, existing professional courses are being subjected to a very thorough scrutiny, and an unprecedented degree of dialogue and negotiation is taking place concerning the appropriate weighting of the various components of each age range course. The Open University's course, Reading Development, concerned primarily with the teaching of reading in the middle years of schooling, has emphasized the importance of the long-term developmental view of reading, and professional courses which are currently being planned for junior and secondary age ranges are more likely to feature the teaching of appropriate reading skills to all children and not only to retarded readers.

Improving the quality of teacher-training courses in the field of the communication skills entails some consideration of accountability. But criteria for teacher effectiveness are very difficult to specify, and this is particularly true where the objectives are concerned with *attitudes* regarding change and innovation. For example, requiring student teachers to develop curricula for the teaching of reading is a feature of their education which demands a marked emphasis. To sequence objectives, to analyse complex objectives into component objectives, and to order these may be seen as the most exacting job of all. Also, the sequencing process is one that the teacher must repeatedly inspect, empirically verify and revise, in a continuous attempt to improve instruction. It is important that the attitudes of student teachers reflect the need for this degree of professional rigour.

The coordinated effort of teacher educators to facilitate the identification of shared needs and to cater for these in a systematic way acceptable to all, is the utopian solution to the problem of the provision of resources for reading in the field of teacher-training. The design and production of multimedia materials are central to curriculum development only if the resulting materials constitute an intrinsic part of the teacher and/or learning process. The latter may be outlined by principles of educational technology as follows:

1 define precisely what skill the learner should have achieved at the end of the exercise
2 select, adapt or devise the *means, materials, media*, in order to enable and facilitate the achievement of the defined skill
3 evaluate the success of the selected techniques in 2.

It is at this basic level of operation that the parallel nature of the roles of teacher and teacher educator are most apparent. Student teachers who have personally derived benefit and satisfaction from a variety of approaches to learning are more likely to be flexible in the selection of techniques for their own pupils' learning. Also, student teachers must be made familiar with the increasing volume of published media, hardware and software, for the teaching of reading and they must learn how to evaluate it, or they may become passive recipients of 'kits' and 'packages' throughout their teaching lives. They should have experience of working on materials in the same way that children will be expected to work, that is, with appropriate technological aids, and in a variety of different groupings, from the mass viewing of a film or video-tape to individual student study.

Learning strategies and techniques percolate from teacher educator to teacher to pupil, ideally, becoming absorbed into regular evaluation and continuous monitoring of personal progress.

40 Teacher training — a teacher's view

Kathleen M. Wilkinson

The teaching of reading is an essential and sometimes neglected part of teacher training. Reading itself is a highly structured task and therefore calls for detailed knowledge on the part of the teacher. As Moyle (1969) suggests, students need during their initial training to study the 'complete range of reading growth'. The trouble is, of course, that students themselves believe that only infant teachers need this knowledge and it is only later when they start teaching that the truth dawns.

The problem lies, too, in the amount of time which can be allocated to the subject in the colleges of education. Unfortunately, [illegible] stress for some years has been on the academic progress of the students, and this was inevitable when we saw the introduction of the B.Ed. etc. Not only were colleges trying to push for high specialist knowledge but they were frequently in the van of new ideas in education and classroom practices. Consequently, many of the old method lectures disappeared and students were given theory but little example or help in dealing with the handling of children. Certainly a great deal has to be squeezed into three years of college life but specialist knowledge is useless in the hands of a teacher lacking professional competence. You might suggest that this plea for order and discipline in the classroom is out of context here, but I would maintain that the highly structured nature of the process of learning to read calls for a controlled situation.

Many students see little value in learning to teach reading when they are at college. Certainly when I emerged as one of the first three-year trained teachers I was interested only in teaching my specialist subject. I was frustrated and disappointed in my first years of teaching because I found that I needed to teach children to read before I could get on with my subject. You cannot teach what you don't know and until you start teaching you often don't appreciate the necessity for such knowledge. A rapid expansion of inservice training is necessary to overcome this. Compulsory courses in the teaching of reading for first and second year teachers and refresher courses every eight years would be most helpful. It is obvious from the response to day conferences for probationers that young teachers are only too willing to come on courses to learn the fundamentals of teaching reading. Day-release courses should be provided by experts in the reading field. We must remember, however, that the teachers are giving up school time and therefore the courses must be of real practical help.

Teacher-tutors in schools whose specific task would be to train teachers to teach reading and to give them guidance in this field would be a great help. After a period of three years these tutors could resume classroom teaching and thus keep abreast of everyday work in the classroom.

Whatever the future pattern of teacher-training, we must provide more opportunities for students to learn more about the teaching of reading while they are at college and also provide more opportunities to refresh and deepen their studies after they are qualified. Extensions to our in-service training programmes are desperately needed.

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